



COMMISSION EUROPÉENNE
DIRECTION GÉNÉRALE DE LA PÊCHE ET AFFAIRES MARITIMES

Le Directeur général

23.12.2005 D 14264

Bruxelles, le
DG/FISH/B3 NB/gc D (2005)

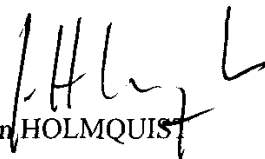
Objet : Rapport évaluation ex-post de l'accord de pêche CE/Guinée-Bissau

Monsieur le Président,

Je vous prie de bien vouloir trouver ci-joint l'étude d'évaluation ex-post de l'accord de pêche CE/ Guinée-Bissau réalisée par des experts externes pour le compte de la Commission en vue de la préparation des négociations pour un nouvel accord et protocole.

Je vous remercie de bien vouloir faire la diffusion adéquate auprès des membres de la Commission de la Pêche et d'autres Commissions compétentes au sein du Parlement.

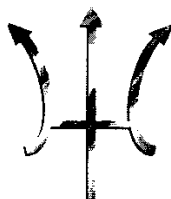
Veuillez agréer, Monsieur le Président, l'expression de ma haute considération.


Jörgen HOLMQUIST

Annexe: Ex-post evaluation of the current protocol to the fisheries agreement between the European Community and the Republic of Guinea-Bissau

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MEGAPESCA Lda

PROJECT FISH / 2003 / 02

**FRAMEWORK CONTRACT FOR PERFORMING EVALUATIONS,
IMPACT ANALYSES AND MONITORING SERVICES IN THE CONTEXT
OF FISHERIES PARTNERSHIP AGREEMENTS CONCLUDED BETWEEN
THE COMMUNITY AND NON-MEMBER COASTAL STATES**

SPECIFIC AGREEMENT NO 18: GUINEA BISSAU

**EX-POST EVALUATION OF THE CURRENT PROTOCOL TO THE FISHERIES
AGREEMENT BETWEEN THE EUROPEAN COMMUNITY AND THE REPUBLIC OF
GUINEA BISSAU**

WORKING DOCUMENT

AUGUST 2005

16 December 2005

<p>This report has been prepared with the financial support of the European Commission.</p> <p>The views expressed in this study are those of the authors and do not necessarily reflect the views of the European Commission or of its services. This report does not seek to establish the Commission's future policy in this area. It merely acts as a guideline document for policy makers.</p> <p>The content of this report may not be reproduced, or even part thereof, without explicit reference to the source.</p>		
<p>Oceanic Développement, Poseidon Aquatic Resource Management Ltd and MegaPesca Lda (2004). 'Framework Contract for Performing Evaluations, Impact Analyses and Monitoring Services in the Context of Fisheries Partnership Agreements Concluded Between the Community and Non-Member Coastal States.</p> <p>INTERNAL DOCUMENT: NOT FOR PUBLICATION</p> <p>Z.I. du Moros, 29900 Concarneau, France</p> <p>Tel/Fax: +33 2 98 50 89 99</p> <p>Email: oceanic.dev@wanadoo.fr</p> <p>URL: http://www.oceanic-dev.com</p>		
Version: Final Report	Report ref: FPA 18/GB/05	Date issued: August 2005

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ACRONYMS USED

ACP	Africa, Caribbean, Pacific
AfDB	African Development Bank
AGC	Agence de Gestion et de Coopération entre la Guinée Bissau et le Sénégal
ANP	National Popular Assembly
AU	African Union
BCEAO	Central Bank of West African States
BRD	By-catch Reduction Device
BM	Biodiversity Management
CAS	Country Assistance Strategy
CEDEAO	ECOWAS
CEMAC	Central African Economic and Monetary Community
CFP	Common Fisheries Policy
CIPA	Centro de Investigação Pesqueira Aplicada (Center for Applied Fisheries Research)
CITES	Convention of International Trade in Endangered Species
CBMP	Coastal and Biodiversity Management Project
CONAPEMAC	Marine Fisheries National Cooperation of the Peoples Republic of China
CPLP	Community of Portuguese Speaking Countries
CSRP	Commission Sous-régionale des Pêches/Sub-Regional Fisheries Commission
DWFN	Distant Water Fishing Nation
EC	European Commission
ECOWAS	Economic Union of West African States
EDF	European Development Fund.
EEZ	Exclusive Economic Zone
EPA	Economic Partnership Agreement
EPCA	Emergency Post-conflict Assistance
EIU	Economist Intelligence Unit
ESAF	Enhanced Structural Adjustment Facility
EU	European Union
EUROSTAT	EU Statistics
FA	Fisheries Agreement
FAD	Fish Aggregating Device
FAO	Food and Agriculture Organisation of the United Nations
FIBA	Fonds d'Investissement du Banc d'Arguin
FISCAP	Fiscalização da Actividade Pesquera (MCS authority since 2004)
FISCMAR	Fiscalização Marítima (former MCS authority)
FMP	Fisheries Management Plan
FPA	Fisheries Partnership Agreement

GDP	Gross domestic product
GEF	Global Environment Facility operated by UNDP
GRT	Gross Registered Tons
GT	Gross Tons
HDI	Human Development index
HF SSB	High Frequency Single Side Band (radio)
HIPC	Heavily Indebted Poor Countries
HRD	Human Resource Development
IBAP	Instituto de Biodiversidade e Areas Protegidas
ICCAT	International Commission for the Conservation of Atlantic Tunas
ICJ	International Court of Justice
IFAD	International Fund for Agricultural Development
IFC	International Finance Corporation's
ILO	International Labour Organization
IMF	International Monetary Fund
IMO	International Maritime Organisation
IUCN	World Conservation Union
IUU	<i>Illegal, Unregulated, Unrecorded.</i>
MCS	Monitoring, Control and Surveillance
MS	Member State (of the EU)
MSY	Maximum Sustainable Yield
NGO	Non-Governmental Organisation
NPRSC	National Poverty Reduction Strategy Paper
OGE	General State Budget
PAIGC	African Party for the Independence of Portuguese Guinea and Cape Verde
PASP	ADB funded Fisheries Sector Support Project
PESCARTE	Direcção Geral da Pesca Artesanal (General Directorate for Artisanal Fisheries)
PRGF	Poverty Reduction and Growth Facility
PRS	Social Renovation Party
PRSF	Poverty Reduction and Growth Facility
PSRDP	Private Sector Rehabilitation and Development Project
RIB	Rigid-hull inflatable boat
SME	Small and Medium Enterprises
SMP	Staff Monitored Programme
SOCU	Surveillance Operations Coordinating Unit (CSRP)
SSEFAP	Secretariat of State of Employment and Fight Against Poverty
SWOT	Strengths, Weakness, Opportunities and Threats analysis
TAC	Total Allowable Catch
TED	Turtle exclusion device

UEMOA	West African Economic and Monetary Union: West African Union
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNCLOS	1982 United Nations Convention on the Law of the Sea
UNDP	United Nations Development Programme
UNDP	United Nations Development Programme
USAID	United States Agency for International Development
VA	Value Added
VHF	Very High Frequency (radio)
VMS	Satellite-based Vessel Monitoring System
WB	World Bank
WHO	World Health Organization
WTO	World Trade Organisation

EXECUTIVE SUMMARY

1. This report sets out the findings of a mission concerning an ex-post evaluation of the current fisheries agreement between the European Community and the **Republic of Guinea Bissau**. The study was commissioned by the Directorate General of Fisheries of the European Commission under a framework contract for performing evaluations in the context of fisheries partnership agreements concluded between the Community and non-member coastal states operated by a consortium comprising Oceanic Développement (France), Poseidon Aquatic Resource Management (UK) and Megapesca Lda (Portugal).
2. The consultants visited Guinea Bissau in May 2005. The study team consisted of an Economist (Team Leader), and a Fisheries specialist. The mission comprised a review of documentation associated with the protocol and activities conducted under it, and meetings with key stakeholders, including representatives of the Government of Guinea Bissau and its fishery sector. Additional desk-based support was also provided by an Evaluation Specialist, and an Environmental/Fisheries Biologist. The mission also drew on the findings of a Fisheries Legal Specialist and Fisheries MCS specialist during an earlier mission "Specific Convention No.13: "Technical Assistance to the Guinea Bissau Ministry of Fisheries in relation to strengthening Fisheries Monitoring Control and Surveillance and improving the fisheries legislation".
3. Guinea Bissau is a West African country having Senegal as the neighbouring country to the North and the Republic of Guinea to the South. Its small and ethnically diverse population, extreme poverty, political instability and weak governmental institutions constitute significant constraints to **economic development**. The structure of GDP is dominated by agriculture and development assistance, with fisheries accounting for 7 to 10% of GDP.
4. Guinea Bissau struggles to provide a favourable climate for private sector investment and development. **Post colonial history** is dominated by a series of successive political crises, culminating in a civil war in 1998/99. Restoration of democracy in 2001 was undermined by a military coup in 2003. Elections in 2004 (National Assembly) and 2005 Presidential have been successfully held, despite a continued failure of interim governments to deliver economic development and demilitarise armed factions, which remain the most critical short term policy objectives. It is hoped that a programme of public sector financial reform supported by the IMF will stabilise the situation sufficiently to allow the delivery of much needed budgetary support to allow these objectives to be pursued.
5. Although the **investment code** treats national and foreign investors equally, in practice there are significant impediments including high cost of imported inputs, bureaucratic procedures, corruption, and lack of physical and commercial infrastructure. The **poverty reduction strategy** focuses on private sector agricultural diversification directed at regional and international export markets, but the objectives are not reflected in sectoral plans, and implementation is impaired by poor infrastructure (port facilities, water supply, sanitation and roads) and lack of compliance with sanitary and phytosanitary measures. The fisheries sector in particular suffers from lack of access to the EU market due to non-compliance with EU sanitary directives. Under present conditions the country will be unlikely to benefit from the enhanced trade opportunities to be delivered by a regional EPA expected to be signed with ECOWAS, due to commence in 2008.
6. Fisheries administration, management and development institutionally fall within the **Ministry of Fisheries** and its Directorates. Fisheries policy is only weakly defined and stagnant. Policy development capacity and consultative mechanisms are virtually non-existent. Implementation capacity in terms of fisheries information and research, national fisheries development, fisheries management, monitoring control and surveillance and hygiene inspection are weak to the point of irrelevance. Policy with respect to the management of the different foreign fisheries access arrangements is poorly defined and has not been applied in the best national interests. The policy for development of small scale fisheries is also poorly defined and ineffective.

7. The **legal framework** for the sector comprises an inadequate and outdated Fisheries Law which is in conflict with subsidiary regulations. Fisheries MCS procedures and penalties are also not defined adequately, and a dispute regarding competences in this respect with the Navy has not been resolved. The lack of adequate fisheries regulation represents a significant constraint to sectoral development. A new draft Fisheries Law and regulations have been proposed by a technical assistance mission supported by the European Commission.
8. The main **domestic fisheries stakeholders** are some 1680 subsistence fishers in coastal communities. In addition up to 6,600 small scale artisanal fishers, mostly of foreign origin, are linked to artisanal fish smoking, drying and salting activities and a network of over 7,000 traders. Apart from a small semi-industrial project supported by China, there are no national industrial fisheries, nor any fish processing industry. The national fishery sector is substantially decapitalised.
9. The **national fishery** focuses on coastal resources, producing about 26,000 tonnes per year. These include small pelagic fish, demersal and large pelagic fish (including sharks), but there are no catch statistics. Annual fish consumption is estimated to be 20-28kg/capita, and fish appears to make a vital contribution to the national diet (70% of protein consumption).
10. In addition, **foreign industrial fleets** fishing in Guinea Bissau comprising demersal trawl operators targeting shrimp, cephalopod and fish resources, and tuna purse seiners and pole and line vessels targeting tuna resources. Production is reported to be about 31,000 tonnes in 2001, but is likely to be much higher.
11. **Access arrangements** include the EU-Guinea Bissau Fisheries Partnership Agreement, an agreement with FEDERPESCA (African flagged vessels with Italian beneficial ownership, with no limit set to trawl fishing but with 25 vessels operating in 2005), an agreement with CONAPEMAC (Chinese interests, providing for 26 trawl vessels), and individual national charter/joint venture arrangements (providing for 18 trawlers and 3 pelagic trawlers in 2005 operating under various flags of convenience). A semi-industrial operation of *ramasseurs* and canoe vessels is operated by Korean/Senegalese interests. A reciprocal fisheries agreement between Guinea Bissau and Senegal has not been ratified, and a 2001 agreement with Korean interest group KIM Anavipesca was not renewed. The Guinea Bissau EEZ is also exploited by sustained level of IUU fishers, with evidence of a significant Korean presence.
12. The principal **fisheries resources** of interest to industrial fisheries are shallow water and deepwater shrimps, cephalopods (principally octopus and cuttlefish), a range of demersal fish species including hake, small pelagic fishes (horse mackerel, sardinella and shads), large pelagic fishes (yellowfin, and skipjack tunas and sharks). There is no comprehensive data on the conditions of the demersal resources. However available evidence suggests that shrimp stocks (both shallow and deep water) are exploited at unsustainable levels. There is also evidence that the sustained level of trawling over many years has negatively affected the demersal biomass, which has decline by a factor 6 since the early 1990s. However there is no evidence of any significant decline in cephalopod and target fish stocks. The catches of tunas and swordfish in the Guinea Bissau EEZ represent only a fraction of a percent of the total, and their exploitation in this region has no impact on overall stock status. There is a lack of reliable data on which to base a definitive stock assessment in relation to the main commercial shark species. However there is evidence of a significant regional decline in the abundance of blue shark and mako sharks, but the impact of their exploitation in the EEZ is not known. Although evidence is scant, small pelagic stocks are considered to be only lightly exploited in this region, especially so the sardinellas.
13. Guinea Bissau has a **unique marine and coastal environment**, with several endangered species of marine mammals and reptiles present. The green turtle has a regionally important breeding ground on Poilão Island and demersal trawling is implicated with a bycatch mortality of small but finite number of marine turtles. Several marine protected areas have been created, with World Bank support (Coastal and Biodiversity Management Project). Mangrove resources and the important habitats they provide for fisheries are threatened by agricultural clearance and cutting for fuelwood, including for fish smoking and drying.

14. The **current protocol**, which is the 9th under the Fisheries Agreement between the EU and STP, covers the period from 16 June 2001 to 15 June 2006. It was amended in 2004, principally to improve accountability in financial disbursement and to reduce the shrimp fishing opportunities in line with an apparent decline in this resource (and also introducing important conditions regarding non-discrimination in relation other fisheries access arrangements). The Protocol currently provides fishing opportunities for 4400 GRT of shrimp trawling, 4,400 GRT of cephalopod/fish trawlers, 40 EU purse seiners, and 30 pole and line/surface longline vessels.
15. The 2001/2005 EU/ Guinea Bissau FPA has been effective in providing **fishing opportunities** that permit the deployment of an annual average of 33 shrimp trawlers (corresponding to an average of 40% of the GRT opportunities) and 9 cephalopod/fish trawlers (corresponding to 67% of the GRT opportunities). In addition, the opportunities have been utilised by an average of 27 tuna seiners and 9 pole and line vessels. Uptake by surface longline vessels has been negligible.
16. The protocol and its amendment have provided a **financial compensation** to Guinea Bissau averaging €8.26 million over the four years (three years at €9 million and one at €7.25 million). In addition, for support measures in favour of the fishery sector, the Agreement has provided €3.25 million, under an ad hoc payment made in 2001 to compensate Guinea Bissau for the loss of income due to withdrawal of vessels due to the 1998/99 civil war, and is progressing with disbursement of €5 million allocated by the 9th Protocol.
17. **Payments** of financial compensation are up to date for the first four years of the protocol, and are fully accounted in the state budget. For support measures, disbursement by the Commission was initially prevented by lack of accountability for the use of the first tranche of the *ad hoc* payment. However the introduction of a dual signature approval system by the mid-term amendment has resolved this problem, and the support measure activities and disbursements are progressing well.
18. Comprehensive **catch data** for the trawl fishing activities under the Agreement is not available. It is estimated that the EU shrimp trawl fleet caught an average of 5,813 tonnes/annum, and the cephalopod fleet 1,977 tonnes/year. These vessels are relatively highly dependent on the Agreement (80% and 60% of catches in the EEZ respectively). The actual fishing activity by the tuna sector (purse seine and pole and line vessels) is low (1% and 2% of total catches respectively) and catches in the EEZ were therefore only 594 tonnes and 91 tonnes in each case.
19. The financial benefits of the Agreement are not equally shared, in that it benefits the EU considerably more than Guinea Bissau. Only 1.5% of the average annual **value added** generated of about €40 million falls to the partner country. EU fishers and fish processors share the remaining benefits. Guinea Bissau employment on board EU vessels is limited to 109 crew and 32 observers. EU vessels rarely visit Bissau except for mandatory inspections, and there are no supplies of target or bycatch fish species to the domestic market. The net benefit to Guinea Bissau of the Agreement is limited to little more than the financial income in the form of fishing licenses and financial compensation, which account for an average of €10.7 million per annum (in the form of compensation, licence fees and other vessel contributions), being about 30% of the annual value of the fishery products generated by the Agreement.
20. However, this contribution accounts for some 4.7% of the GDP and up to 65% of the fisheries sector contribution to GDP. The **financial compensation** from the FPA contributes about 38% of government revenues, and has made a significant impact on political and economic stability during the country's return to democracy following the military coup of 2003.
21. Total **Community value added** attributable to the FA has averaged €39.7 million/annum, of which 33% is direct, 20% upstream and 60% downstream. More than 80% of this value is derived from the shrimp vessel activities, although there may be an over-estimation of downstream multipliers. The EU obtains on average 8,476 tonnes of fishery products valued at €36.1 million/year and 509 FTE jobs. About 80% of these are related to the shrimp fishery, and 19% to the cephalopod fishery. Only 9 jobs are related to the tuna sector. EU payments of €10.7 million comprised 30% of the value (€4262/tonne) of the fishery products (comprising 24% compensation and 6% license fees). The net benefit to the European Community was €29.0 million /year, with a

cost advantage of 3.74, indicating a highly favourable arrangement for the Community. However, due to the decline in shrimp prices in 2004, sales revenues declined to an estimated €27 million in 2004, suggesting a significant reduction in efficiency of the Agreement in the second half of the Protocol.

22. The current protocol has not succeeded in promoting **investment** in Guinea Bissau, neither investment from EC vessel operators working within the protocol nor from the application of funds for support measures. There has been no tangible benefit in terms of **institutional development**. However since the amendment to the 9th Protocol, some important initiatives have commenced. These include planning for the strengthening fisheries law and surveillance operations with a technical assistance supported by the Commission in 2005, and support measure funding for development of sanitary controls for fishery product exports. There is no impact, positive or negative of the FPA on **poverty alleviation** and **food security**.
23. Principal **problem areas** associated with the execution of the protocol include: a) extremely weak capacity on the part of the Guinea Bissau authorities to manage foreign fisheries agreements, resulting in unequal treatment of different partners in apparent breach of non-discrimination provisions of the amendment to the 9th Protocol b) lack of clear policy framework, and hence inability to effectively plan and implement support measures to be funded under the Agreement, c) lack of fisheries MCS capacity to address widespread non-compliance with fisheries regulations d) the depletion of the shrimp and other demersal resources, undermining the value of the Agreement to EU fishers e) dysfunctional observer systems and under- and non-declaration of catches by EU trawl vessels f) the lack of any interaction between the EU vessels and the national fishery and onshore sectors.
24. The **fisheries management plans** prepared by the partner country, and which formed the basis for the shrimp trawl fishing amendment to the 9th Protocol are not founded on a solid scientific basis. Areas of particular concern not addressed by the current plan are depleted shrimp stocks, and by-catch impacts of shrimp and cephalopod trawling, resulting in a significant decline in biomass in the last 15 years. The EU fishing effort under the Agreement, accounting for an average of 33 out of 52 shrimp vessels, and 9 out of 22 cephalopod/fish vessels (overall about one third of the trawl vessels fishing in the EEZ operate under the Agreement). Under and non-reporting of catches undermines a quantitative assessment of impacts, but it is clear that the EU vessels will have contributed to a significant and proportional degree to this outcome. In this respect the Agreement has not contributed towards responsible fishing. The unknown impact of incidental catch of endangered and critically endangered marine turtles in demersal trawl fisheries is also a matter of concern which has not been addressed.
25. Due to low levels of catches in this region compared to others, **purse seine fishing** and **pole and line fishing** as pursued in the Guinea Bissau EEZ have had no significant impact on the sustainability of the target stocks of tuna. Surface longlining activities by EU vessels were negligible and therefore sustained no target stock or bycatch impacts.
26. The Agreement is broadly coherent with **Community policies** in relation to fisheries (in relation to the CFP), development (in relation to the Cotonou Agreement, and particularly in relation to the Article 96 default procedures applied to Guinea Bissau following the military *coup d'état* in 2003) and trade in relation to a future ECOWAS European Partnership Agreement. However the Agreement has been undermined by the weak policy framework of the partner country, especially concerning *non-discrimination in relation to other non-EU access arrangements*. These weaknesses threaten the pursuit of responsible fishing in the EEZ, and therefore undermine the future of the Agreement.

INTRODUCTION

This report provides the findings, conclusions and recommendations of a study to evaluate the Fisheries Agreement and a Protocol between the European Union (EU) and Guinea Bissau.

The study was commissioned in April 2005 by the Directorate General of Fisheries of the European Commission under a framework contract “for performing evaluations, impact analyses and monitoring services in the context of fisheries partnership agreements concluded between the Community and non-member coastal states”, operated by the consortium comprising Oceanic Développement (France), Poseidon Aquatic Resource Management (UK) and Megapesca Lda (Portugal).

The purpose of this study is to provide the European Commission with the data and technical analyses, and specially:

- factual information and a pertinent analysis of the general situation in the partner country and its fishing sector, covering the economic, financial, political, institutional, social and environmental aspects, and likely developments in the short and medium term.
- a cost-benefit analysis of a FPA or of the protocol, and assess its impact on the partner country, at the political, institutional, economic, financial, social and environmental levels.
- a cost-benefit analysis for the European stakeholders, as regards both the conditions of access to the waters and resources for the European distant-water fleet, licences and other elements provided for or to be provided for in the protocol (e.g. setting up joint enterprises, support for investments in developing, processing and marketing fishery products and all other connected activities).
- technical advice relating in particular to the potentials, difficulties, monitoring indicators and certain operational procedures.
- technical recommendations relating to the specific objectives to be attained.

The study is therefore a Ex-Post Evaluation of the 9th Protocol (Council Regulation (EC) No 249/2002 of 21.01.2002) covering the period 16 June 2001 to 15 June 2006, and including a substantive amendment (Council Regulation (EC) No 829/2004 of 26.04.2004 for the period 16 June 2004 to the end of the Protocol . Findings from this report will be used to evaluate the Community policy with regard to this Agreement.

BACKGROUND

The European Community has longstanding relations with Guinea Bissau regarding the fishery sector. The Framework Agreement, which dates from 1980, is one of the earliest agreements concluded by the Community. The Agreement is important both for the fishing possibilities obtained for the EU and for its economic impact on Guinea Bissau.

The 9th Protocol (Council Regulation (EC) No 249/2002 of 21.01.2002) covers the period 16 June 2001 to 15 June 2006, and includes a substantive amendment (Council Regulation (EC) No 829/2004 of 26.04.2004) for the period 16 June 2004 to the end of the Protocol. The main features of the Protocol are that fishing opportunities are provided for EU shrimp trawlers, cephalopod/fish trawlers, tuna seiners, pole and line and surface long line vessels in return for a financial contribution comprising a financial compensation and targeted actions in support of the fishery sector. In addition, the Community has also made an *ad hoc* payment in relation to a period in 1998/89 when the 8th Protocol was suspended, and in 2005 has made advance payments against financial compensation, in order to support the Government of Guinea Bissau in maintaining a fragile stability.

Given the importance of the Fisheries Agreement to the partner country, the European Commission has also supported a separate Specific Convention, under which Technical Assistance was delivered in April and May 2005 to the Guinea Bissau Ministry of Fisheries in relation to “*Strengthening Fisheries Monitoring Control and Surveillance and Improving the Fisheries Legislation*”. These missions have also provided specific inputs and analysis relevant to this evaluation, and relevant parts of the findings are included in this report.

METHODOLOGY OVERVIEW

This Evaluation study was undertaken by a team comprising Team Leader/Economist, Evaluation Specialist, Institutional and Socioeconomic Specialist, and Fisheries Resources specialist. Members of the Evaluation Team visited Guinea Bissau during the period 9th to 24th May 2005, and held detailed discussions with the Ministry of Fisheries (including the Minister), and staff of the Ministry of Environment, Ministry of Economy and Finance and their associated institutions. The evaluation team has also undertaken meetings with Commission staff (DG Fisheries and DG Development), and obtained relevant information from other Commission Directorates (SANCO and Trade) and from EUROSTAT. The consultants have also interviewed EU fishery sector stakeholders in Portugal, Spain and Italy, and have reviewed information from a wide range of development agencies, NGOs and multi- and bilateral donor sources. Appropriate references are provided in the text, and a full bibliography of documents consulted is provided in Annex 2.

The framework for the evaluation was designed by the Commission and the Consortium, following a detailed technical proposal and dialogue in December 2004. This was to a large extent influenced by Council Decision of 19 July 2004 on Fisheries Partnership Agreements (COM(2002) 637 final) which sets out the criteria for the evaluation of the impact assessment of community measures. The evaluation comprises both qualitative and quantitative elements, relating to the costs and benefits of the Agreement, in relation to the social, economic and environmental impacts on the Community in general, the EU fishery sector and the partner country.

The ex-post component of the evaluation provides an historical assessment of the impacts of the FPA, including as far as possible an indication of residual impacts not yet realised. It also assesses the extent to which specific and general objectives of the Common Fisheries Policy have been achieved by the FPA, and investigates linkages with the Community's wider policies on development and trade.

The report is divided into three distinct sections: an Analysis of the General Situation, an Analysis of the fishing Sector and Industry, and Evaluations specific to the Fisheries Partnership Agreement. The first section provides a picture of the general state of affairs in the partner country. This provides background information and analysis on the political and institutional framework in the partner country concerned, paying particular attention to governance issues. The section considers the evolution of the legal system, as well as a more in-depth study of the budgetary system, regarding the appropriation, distribution and management of state funds. An overall view of the national development plan is provided, and linked to the fiscal strategy for achieving it and to the overall macroeconomic situation. The report also considers the development of the partner country's social, environmental and regional policies at a general level, and provides an account of the country's international relations.

The second section focuses solely on the fishing sector and industry in Guinea Bissau. A brief characterisation of coastal water bodies is given, followed by an analysis of the potential and limits of the fisheries, considering the current state of the stocks, as well as the volume and value of catches and a breakdown and analysis of fishing fleets and fishing effort. Of particular relevance here is a comparison of EU fleet activity with that of other foreign fleets operating in the Guinea Bissau EEZ. The trading and market patterns for fisheries products are described along with the compliance with sanitary and other trade requirements. The report explores the fisheries policy of the partner country, and assesses the coherence of the policy and to what extent it is integrated and harmonised with other overlapping policies. The policy development capacity is also assessed, as well as the institutional and financial capacity to implement the outlined policy, with particular focus on the control and enforcement capabilities. The report goes on to describe the coastal habitat/marine ecosystem and to outline the vulnerability of this environment to the various fishing practices. Guinea Bissau's international fisheries relations are described, as well as their relationship to the development of the oil sector, which is expected to have greater impact in future. The section concludes with a breakdown of all stakeholder interests in the fisheries sector and an assessment of the conditions for investment and development within the fisheries sector.

The final section contains the evaluation specific to the effects of the current protocol on all stakeholders, in the partner country and in the Community. It presents a brief summary of the protocol in force. The report sets out the budgetary and financial procedures in place in the partner country for dispersing the Community funds provided under the protocol, followed by an economic and financial analysis, impact analysis on the economic development of the partner country, an environmental and a social impact analysis. This includes the SWOT analysis.

1 ANALYSIS OF THE GENERAL SITUATION

1.1 POLITICAL CONTEXT

1.1.1 Description

Guinea Bissau is a tropical West African country having Senegal as the neighbouring country to the North and the Republic of Guinea to the South. The coast line is interrupted by many estuaries and rivers. In the West the EEZ is extended by the archipelago of Bijagos with more than 80 islands.

The population of the country is estimated at 1.36 million, about a quarter of whom reside in the capital Bissau. However, the majority of the population has a rural life living. The country has a wide ethnic composition with several languages (see Table 1), although Portuguese and crioulo form the *lingua franca*. 45% of the population are muslim, mainly speaking Fula and Mandinka, concentrated in the North and northeast. About 50% follow animist or traditional beliefs and 5% are Christians. Other important ethnic groups are the Balanta and Papel, which live in the south coast, the Manjaco and Mancanha which occupy coastal areas of centre and north, Felupe in Cacheu area and Bijagós in the Bijagós Archipelago.

Table 1 : Ethnic Composition of the Population

Ethnic Groups	% of Population
Balanta	30
Fula	20
Manjaca	14
Mandinga	13
Papel	7
Others	15
European and Mulatos	1

1.1.2 Brief history

The land now known as Guinea-Bissau was once the kingdom of Gabú, which was part of the larger Mali empire. The rivers of Guinea and the islands of Cape Verde were among the first areas in Africa explored by the Portuguese in the 15th century. Portugal claimed Portuguese Guinea in 1446, but few trading posts were established before 1600. In 1630, a "captaincy-general" of Portuguese Guinea was established to administer the territory. The Portuguese used slave labour to grow cotton and indigo in the previously uninhabited Cape Verde islands. With the cooperation of some local tribes, the Portuguese entered the slave trade and exported slaves to Europe and, from the 16th century, to the Americas. In the C.19th and early C.20th the slave trade declined, and Bissau grew to become a major commercial centre, with an economy based on plantations of cashews and cotton. The administrative capital was moved from Bolama to Bissau in 1941, and in 1952, by constitutional amendment, the colony of Portuguese Guinea became an overseas province of Portugal. The territory was administered by a Colonial Governor.

The African Party for the Independence of Guinea-Bissau and Cape Verde was founded in 1956, and guerrilla warfare by nationalists grew increasingly effective during a 12-year war of liberalization. The military coup in Portugal in April 1974 delivered the prospects for freedom, and in August the Lisbon

government signed an agreement granting independence to the province. The new republic took the name Guinea-Bissau obtaining *de jure* independence from Portugal on September 10, 1974.

The country enjoyed only a brief period of stable constitutional rule (1974-1980). In late 1980, the first government was overthrown in a relatively bloodless coup led by Prime Minister and former armed forces commander João Bernardo Vieira, who would rule this country for 19 years from 1980 to 1999. In 1984 a new single-party National Popular Assembly (ANP) was reconstituted. Under this system, the president presided over the Council of State and served as head of state and government. The president was also commander in chief of the armed forces.

Under pressure from the international community, especially France and Portugal, President Vieira allowed a gradual internal liberalisation of the political regime, with a view to implementing full democracy. In 1990 he accepted the principles of a multiparty political system and the constitution was amended accordingly. There were alleged coup plots against the Vieira government in 1983, 1985, and 1993. In 1998-99 a power struggle between the President and the military escalated quickly into a much broader armed conflict concentrated in the capital Bissau. In addition to the death of several thousand people and the displacement of many others, this civil war caused widespread damage to the housing stock, basic infrastructure, government buildings and equipment and the virtual annihilation of the small industrial sector.

Political instability continued after the civil war in 1998-99. President Vieira was ousted by a military coup in May 1999. In February 2000 an interim government turned over power to the founder of the Social Renovation Party (PRS) Kumba Yala, following two rounds of transparent presidential elections.

Despite the elections in 2000, democracy did not take root in the succeeding 3 years. President Yala neither vetoed nor promulgated the new constitution that was approved by the National Assembly in April 2001. Impulsive presidential interventions in ministerial operations hampered effective governance. The resulting ambiguity undermined the rule of law. On November 14, 2002, the President dismissed the government of Prime Minister Alamara Nhasse, dissolved the National Assembly, and called for legislative elections.

Elections for the National Assembly were scheduled for April 2003, but later postponed until June and then October. On September 12, 2003, the President of the National Elections Commission announced that it would be impossible to hold the elections on October 12, 2003, as scheduled. The deteriorating standard of living of the population and the erratic behaviour of President Yala, made a *coup d'état* almost inevitable. The army, led by Chief of Defence General Seabra, intervened on September 14, 2003. President Yala announced his "voluntary" resignation and was placed under house arrest. The government was dissolved and a 25-member Committee for Restoration of Democracy and Constitutional Order was established. On September 28, under pressure exerted by ECOWAS, the Charter of Political Transition was accepted and the nomination of businessman Henrique Rosa for the presidency was carried by consensus. He was sworn in as President mainly to steer Guinea-Bissau back to democracy and will step down to make way for his elected successor.

The transitional government immediately undertook measures to re-establish the normal functioning of democratic institutions. The payment of salary arrears, which had reached unsustainable levels during the regime of President Yala, turned out to be particularly problematic. The reasons included the existence of thousands of 'ghost' civil servants, and the reluctance of international institutions to release funds for this purpose. Another issue that remained unresolved was the regularisation of accounts between suppliers and the state. This was in large part attributable to the inability of the state to generate the internal resources to pay for certain basic requirements, such as food for the armed forces and fuel for the Bissau power station. Nevertheless, in March 2004, Guinea-Bissau held legislative elections which international observers deemed acceptably free and fair. On May 9, 2004, Carlos Gomes Junior became Prime Minister. In October 2004, an army mutiny over unpaid salaries ended with the signing of an accord between the government and the army mutineers. In May 2005, one month before Guinea-Bissau's presidential elections, the country again was at the edge of political chaos. Ex-President Kumba Yala declared himself the rightful President of Guinea-Bissau, withdrawing his earlier "renunciation of power." Meanwhile, the country's military leadership assured its loyalty to the interim President. The second round of the presidential election, between the candidates of Nino Viera (now supported by Kumba Yalá) and Malam

Bacai Sanha, was held on 25th July 2005. The EU, the African Union, the United States and the African Union sent observers to the poll, which passed peacefully, resulting in victory for Nino Viera..

1.1.3 Democratic credentials

Throughout the post-colonial history of Guinea Bissau it is elements within the military, rather than the broad electorate, which have determined the course of Government. There has never been a hand-over of power from one democratically elected government to another. There is no tradition of constitutional democracy to build upon, and history indicates that there is little guarantee that the democratic principle of civilian supremacy over the military will be maintained. Indeed, control over the military is problematic where the members of armed forces fought on opposing sides in a recent civil war, and where ethnicity seems more salient than the other aspects of cohesion and compliance that underpin professional military organizations. The mutiny of 6 October 2004 increased the danger of polarization of Guinea-Bissau along ethnic lines, especially given the widespread perception that the revolt was inspired by Balanta elements in the armed forces, intent on assuming control of the military establishment.

Civil society participates in the implementation of development programmes but in general has not influenced policies. Both in the civil society and institutions, the issue of inadequate capacity remains a major challenge. Guinea-Bissau has never really enjoyed a climate of peace and stability, many of its brightest and most able citizens have fled the country, and its leaders have had very little experience in upholding the rule of law, the respect of human rights and the unimpeded and independent functioning of the executive, legislative and judicial branches of Government. Political maturity and sound democratic institutions are still being sought. Without a return to political stability resulting from the current election process, there is little hope that civil governance will be show effective and sustainable improvements.

1.2 INSTITUTIONAL FRAMEWORK AND SYSTEM OF GOVERNANCE

1.2.1 System of Government

The system of government is defined in the constitution that was adopted in 1984 and amended in 1991. The main branches of Government are:

1. the Executive (consisting of the President as Head of State, the council of State, the Prime Minister, ministers and secretaries of state),
2. the Legislature (People's National Assembly (ANP), 150 members directly elected
3. the Judicial (Supreme Court and tribunals). The Administrative Subdivisions are the Autonomous sector of Bissau and eight regions.

The 1984 constitution defines a sovereign, democratic, secular and unitary republic. The President is the Head of State but not head of government. The amended constitution provides for a 150-member national assembly, chosen from the eight directly elected regional councils. The regional councils elect the President for a five-year term. The National Popular Assembly is the supreme legislative organ and political overseer. The government is the supreme executive and administrative organ of the Republic of Guinea-Bissau. The government consists of the Prime Minister, ministers and secretaries of state.

Legislative power is vested in the Legislative Assembly comprising 150 members. The parliament has a five-year mandate and the highest judicial authority is the Supreme Court. The judiciary is constitutionally independent, but there have been constant interferences in recent periods. Administratively, the country is divided into an autonomous sector (the capital) and eight regions divided into 36 sectors or municipalities. There are no local governments and primary service delivery is carried out by government agencies. Outside the capital, the provincial centres are only sparsely populated and inadequately equipped villages.

The democratic structures of the state defined in the Constitution (executive, legislative, and judiciary) are only emerging weakly. There is no clear separation of powers that would allow for accountability, transparency and the functioning of the different branches. Currently, a major constraint on the performance of the public sector is the lack of a strong political and legal framework that would enable and support the norms of good governance and proper management of public affairs.

1.2.2 Features of the budgetary system for dispersal of funds:

Fiscal policy is expressed through an annual national budget prepared by the Directorate General of Budgets of the Ministry of Finance. The political instability which has prevented investment and undermined the functioning of the State apparatus has also disrupted the proper implementation of fiscal policy. No stated investment policy has ever been prepared and 'classical' plans and strategies based on detailed sector studies have not been defined or successfully implemented.

In theory, the budget preparation procedure is structured in a way that is consistent with constitutional principles. The main processes are (i) the preparation of the State budget and the National Development Plan by the Government and (ii) approval of the budget and the evaluation of its execution by the National Assembly. The budget cycle is annual and the fiscal year corresponds to the calendar year. In addition, the budget preparation process, will in the long term, have to comply with the UEMOA directives.

The actual practice, however, is distant from the theory. The budget preparation process is jeopardized because of persistent political instability. In recent years the process is characterised by: (i) a progressive slippage of the budget schedule and the late vote of the Budget Acts during the previous years (2000/2002); (ii) the absence of a formal budget for FY 2003 (meaning that government expenditures are carried out on the basis of the estimated figures for FY 2002, without relation to the real needs of the sectors); and (iii) the absence of any concrete actions toward the triggering of the 2004 budget preparation process.

The legal framework and the constitutional process for the budget elaboration have not been observed for a long period. In the absence of a functional legislative branch, the Government acts without authorization from the representatives of the people and there is no link between the government policies and the management of public finances. Consultation with civil society, therefore, is nonexistent. There are no formal auditing procedures, no management controls, and no evaluation processes or mechanisms implemented. The investment component of the budget is prepared mainly on the basis of donor willingness to finance projects.

Guinea-Bissau currently has a serious financial crisis. International debt is high and basic public services such as electricity and water are at best erratic due to lack of operational funds. There are frequent arrears in the wage bills of those employed in public administration and the armed forces (with potentially disruptive consequences). Some funds specified for fisheries management purposes under EU agreements have not been used for the agreed purposes. There is a clear need for significant upgrading of the financial and budgetary procedures at the heart of government, with a transparent and sound budget preparation process, and improved budgetary discipline including audit controls.

There is no mid-term expenditure framework¹ in place. However at the end of 2004 the World Bank recommended a "Medium-term strategy to improve performance and accountability aimed at (i) regaining control over civil service employment management; and (ii) reintroducing accountability through broader legislative civil society involvement in all aspects of the budget process. A number of short and medium action points were identified in relation to the processes of a) budget preparation and b) budget implementation. The key points for implementation are:

¹ MTEF (Medium-Term Expenditure Framework) is a transparent planning and budget formulation process establishing credible contracts for allocating public resources to strategic priorities while ensuring overall fiscal discipline. The process entails two main objectives: the first aims at setting fiscal targets, the second aims at allocating resources to strategic priorities within these targets.

1. Improved management of civil service to ensure that civil servants are paid adequate wages and that they are capable of delivering efficient, client-oriented government operations. Three issues have to be considered: total wage bill, civil service employment, and pay.
2. Retrenchment and control of public employment and removal of “ghost” civil servants and military on public pay.
3. Greater legislative and civil society involvement in the budget process.

1.3 LEGAL FRAMEWORK

The legal system is defined and expressed in the current Constitution was adopted on 6 May 1984, and amended in 1991, 1993, and 1996. The 1991 amendment legalised political parties other than the African Party for the Independence of Portuguese Guinea and Cape Verde (PAIGC). The National Assembly adopted a new constitution in 2001, but this was neither approved nor vetoed by the President.

The Prime Minister is the head of the government, and it is his duty to guide and coordinate its action and ensure the execution of the laws. Article 32 guarantees that all citizens have the right of access to judicial organs to seek redress for violations of their constitutionally recognised rights and the law. There is no death penalty. The constitution guarantees that foreigners and expatriates who reside in or are in Guinea-Bissau enjoy the same rights and are subject to the same duties as nationals (with the exception of political rights).

The tribunals are given the competence by the Constitution to administer justice on behalf of the people. The Supreme Court of Justice is the supreme judicial institution of the Republic. The Superior Council of the Magistrate nominates its judges. Judges of the Supreme Court of Justice are sworn in by the President of the Republic. It is incumbent upon the Supreme Court of Justice and tribunals instituted by law to exercise the jurisdictional function, with a duty to do so independently and only subject to the law.

The judiciary is constitutionally independent. However, during the years 2000-2002 there were several reported direct interventions in judicial decisions by Government, as well as the dismissal of two Supreme Court Presidents. Several Presidential Orders were adopted, overruling the existing laws passed through Parliament, in direct contravention of the constitutional hierarchy of law whereby a legislative act cannot be overruled by an administrative act. In consequence, a number of Presidential Orders deemed incompatible with the Laws have been subject to legal challenge, with variable results, thus adding to general dissolution of rule of law.

Recent history indicates that the structure of the state (executive, legislative, and judiciary) particularly with respect to presidential powers has not developed in a manner that ensures a clear separation of powers that would allow for the proper functioning of an independent judiciary. Political maturity and sound democratic institutions are still being sought and the country has little experience in upholding the rule of law, the respect of human rights and the unimpeded and independent functioning of the executive, legislative and judicial branches of Government. Quality of legal drafting is often compromised by the poor condition of public sector institutions. Legislative acts are frequently inconsistent internally and with each other and in some cases open to constitutional challenge.

1.4 RELATIONS WITH THE MAIN EXTERNAL PARTNERS

1.4.1 *Membership of regional and international organisations*

Guinea Bissau is a member of two main regional organisations: the Economic Community of West African States (ECOWAS) and the West African Economic and Monetary Union (UEMOA). Guinea-Bissau has yet to adjust the depth and coverage of its domestic rules and its institutions to the broader framework used by the UEMOA, which would provide the advantage of a set of tools for budgetary discipline. The rate of inflation has been controlled by the adoption of the Franc CFA and is expected to remain within the UEMOA's target of less than 3 percent. Guinea Bissau has also signed a regional commercial agreement within the UEMOA framework, which foresees the establishment of a common market inside which all goods, services, people and investment capital can move freely, the suspension of custom's rights and abolition of restrictions on import-export quotas among the states.

The Republic of Guinea Bissau is a member of the United Nations, the African Union and the Community of Portuguese Speaking Countries (CPLP), among others. Guinea Bissau has been one of the WTO's member states since May 1995, even though it has been largely absent in the various negotiations which took place. However its position is reflected at the UEMOA's level as a West African and African economic block.

Guinea Bissau is signatory of the Lomé Convention and the Cotonou Agreement which define its development and trade relationships with the European Union as a member of the African Caribbean and Pacific (ACP) group of less developed states.

1.4.2 *Regional relations*

Relations with Senegal are overshadowed by the long running rebellion in Senegal's southern Casamance where the Movement of Democratic Forces in the Casamance (MFDC) has been waging an independence campaign against the central government in Dakar since 1982. The MFDC has used Guinea Bissau as a launching pad for attacks inside Casamance. Guinea Bissau's former president, João Bernardo Viera, was accused of supplying the rebels with weapons and was overthrown in a coup in May 1999. A fisheries agreement with Senegal was signed in 2002, but no protocols were developed and the measures relating to a joint zone remain unimplemented. Fisheries access to Guinea Bissau waters by Senegalese fishers therefore remains outside the scope of the bilateral relationship.

1.4.3 *Relationships with Donors*

All the bilateral donors withdrew from Guinea Bissau after the civil war of 1998/99. The main donor partners are now the European Union, China and the Bretton Woods Organisations (World Bank, including the IFC, and the IMF).

1.4.3.1 *European Union*

National Indicative Programme

The National Indicative Programme was adopted for the period 2001 to 2007. It sets out the development strategy for funding under the European development Fund. EDF development funding for Guinea Bissau is directed at the primary objectives of i) rehabilitation and development of infrastructure and ii) support for the consolidation of the rule of law, democratisation, and improvement in public administration. The 8th EDF supported the construction of bridges (€60 million).

Under the 9th EDF the National Indicative Programme was programmed to provide €62 million (2002-2007) directed in large part (€40 million, i.e. 56%) at infrastructures rehabilitation, €17 million for

democratic state consolidation (including public administration reform) and €5 million for macroeconomic and capacity building. No budget support programme was foreseen, whilst the major part was directed to the construction of roads and other rural infrastructure. However, given events in the interim period, the Community has recognised the need for budgetary support, especially during the sensitive process of restoration of democracy (legislative elections in 2004, presidential elections in 2005, with the second round completed on 24th July 2005).

A policy decision was therefore made by the Community² to provide budgetary support, subject to a clean bill of health on governance and financial management from the IMF Staff Monitored Programme launched in April 2005, and this assessment is expected to be completed by the end of September 2005. The NIP will therefore provide €4 million for the budgetary support programme, plus an additional €2 million from the FLEX Instrument (which has replaced the STABEX instrument). A further €3.2 million will also be drawn from the RIP funds. The total of the BSP will therefore amount to €9.2 million in 2005. To assist with the liquidity of the country whilst these instruments are being set up, the Commission has agreed to advance payment of €5 million against the balance of the outstanding payments under the 9th protocol of the Fisheries Partnership Agreement. This payment was processed and transferred in June 2005.

Future needs are related to the need to restructure the armed forces and demobilise large numbers of soldiers. UNDP is preparing a security sector reform programme, but in the absence of a completed army census, its dimensions cannot be established. The European Commission estimates a requirement of €13 to 15 million, and the source of this funding is not yet established, although there is a proposal being debated regarding a possible contribution from the 9th EDF.

1.4.3.2 Article 96 Procedure

Following the military coup of 14 December 2003, Guinea Bissau is considered by the Community to be in breach of Article 9 of the Cotonou Agreement, which provides for “respect for all human rights and fundamental freedoms, including respect for fundamental social rights, democracy based on the rule of law and transparent and accountable governance” in the partner country. As a result the country is subject to a consultation procedure under Article 96 of the Cotonou Agreement³, under which the Guinea Bissau authorities have undertaken to apply “appropriate steps” as set out in a draft agreement.

The steps are:

- holding of a fair, free and transparent general election on 28 and 30 March 2004;
- confirmation of progress towards a return to an independent judiciary with the appointment of a public prosecutor and the election of the supreme court president\$
- overhaul of the public accounting system
- Implementation of the emergency economic programme
- a census of government employees
- adoption of corrective measures in the matter of public finances, including audits of the financial control system, public procurement and government revenue.
- repayment of the Community budgetary support following the 2003 audit
- initiation of administrative and judicial proceedings against officials of the government preceding the transition period who committed irregularities or fraud.

² Personal Communication, H.Salmon, DG Development, European Commission

³ COUNCIL DECISION of 24 September 2004 concluding consultations with Guinea-Bissau under Article 96 of the ACP-EC Partnership Agreement

Although the process has been delayed, it appears that the appropriate steps are being implemented in accordance with the Article 96 process. The holding of elections in 2005 is a major indicator of achievement in this respect.

Economic Partnership Agreement

An EPA which will cover Guinea Bissau is under negotiation at the level of the ECOWAS. Negotiations on the Economic Partnership Agreement (EPA) between ECOWAS West African countries and the European Community (EC) were launched in Brussels on 27 September 2002. The objective of the EPA is concurrent with the three inter-linked objectives of the Cotonou Agreement:

- (i) Poverty reduction and ultimately its eradication;
- (ii) Sustainable development; and,
- (iii) Smooth and progressive integration of ACP countries into the world economy.

The first phase of the negotiations were conducted at the all-ACP level and covered horizontal issues of interest to all parties. The EPA aims to prioritise regional integration and strengthen the competitiveness, on macro-economic and sector wide policies aimed at ensuring a unified market, and on the establishment of a surveillance mechanism of the free trade area. Community policy is to negotiate EPAs on a regional basis. For West Africa, a roadmap was adopted by the Ministers of ECOWAS states at a meeting in Accra on 4 August 2004 and was formally agreed by an exchange of letters. It sets out an indicative work programme, defines the negotiating structure and operational modalities and recalls the integration priorities of the West African region. At the first technical meetings held in Abuja (Nigeria) on 21 and 22 September 2004, it was decided to structure the negotiations according to three technical groups: the first question connected to regional integration of the West African market (free trade area, customs union, trade facilitation, sanitary and phyto-sanitary measures, and technical barriers to trade); the second on trade-related issues (in particular competition, investment and intellectual property rights); and the third on services.

The national authorities of ECOWAS broadly agreed with the EPA concept. ECOWAS provides the negotiating front for the fifteen countries that made up the group plus Mauritania. Apart from reciprocal quota and duty-free access to both markets, EPA may also lead to trade diversion, trade creation, loss of trade revenues and de-industrialization, among others. Therefore, there are a number of critical challenges facing the West African countries as they go to negotiations. ACP Partners have the option to request specific sectoral negotiations where there are foreseen impacts which should be addressed in the design of the EPA. The intention is that the EPA will come into force on 1 January 2008. Until now ECOWAS states have not requested any such discussions on fisheries.

It is reasonable to say that the trade effect of the EPA on ECOWAS will be phased over several years, starting in 2008. It is likely that in the short term the impacts will fall more on the domestic market rather than the export sector. This is because most of the countries already have under- and un- utilized trade preferences with the EU. In the case of Guinea Bissau, the country may export fishery products free of duties to the EU, but is unable to do so since it cannot meet the sanitary conditions. Thus, the EPA will place European imports as a major competitor against domestic production, as well as putting EU imports at an advantage relative to non-EU trading partners. The Community has indicated that it will consider providing support to cover the interim adjustment costs, and also that impact mitigation measures may be introduced within the MPA. In other words, there are potential trade creation and trade diversion effects from the EPA. However, according to a recent study⁴, the additional impact on Guinea Bissau economy is expected to be limited compared to other countries in the region, as indicated in Table 2.

⁴ The Impact of ACP/EU Economic Partnership Agreements on ECOWAS Countries: An Empirical Analysis of the Trade and Budget Effects, Final Report, Matthias Busse, Axel Borrmann and Harald Großmann, HWWA - Hamburg Institute of International Economics, Hamburg, July 2004

Table 2 : Projected Trade Effects of EPA on ECOWAS Countries, 2001

Country	Trade Creation		Trade Diversion		Total Trade Effect	
	Million US\$	% of preferred imports	Million US\$	% of non-preferred imports	Million US\$	% of preferred imports
Benin	20.4	7.6	10.7	3.2	31.1	11.6
Burkina Faso	14.1	5.7	9.8	3.2	23.9	9.7
Cape Verde	16.9	9.2	4.5	7.1	21.5	11.7
Cote d'Ivoire	69.3	6.0	25.3	2.9	94.7	8.2
Gambia	8.2	5.8	5.8	6.6	14.0	9.9
Ghana	45.8	3.7	40.2	2.4	85.9	6.9
Guinea	14.3	4.9	10.0	3.3	24.3	8.3
Guinea Bissau	1.6	4.5	0.3	1.1	1.9	5.2
Mali	13.3	3.6	8.3	1.3	21.6	5.9
Mauritania	9.8	7.2	5.4	2.8	15.2	8.6
Niger	4.6	4.9	3.5	2.3	8.1	8.6
Nigeria	348.3	12.5	229.1	7.6	577.4	20.8
Senegal	71.2	8.0	31.4	3.8	102.7	11.5
Togo	10.1	6.6	6.5	3.2	16.6	10.9
Average	46.3	9.2	27.9	5.8	74.21	15.7
Total (mill. US)	647.9		390.8		1,038.9	
Nigeria's share of total (%)	53.8		58.6		55.6	

The EPA has no short term potential to ameliorate any loss of national income that may arise due to a change in the dimensions of a Fisheries Partnership Agreement between the Community and one of the ECOWAS states. In the case of Guinea Bissau, there is potential for longer term development of mutually beneficial additional fishery sector trade. Not only does this cover exports of fishery products to the EU, but also imports to fishing and processing sectors. However the potential is undermined by the inadequacy of resource management. Therefore the successful outcome of the EPA in the fishery sector is dependent on the success of the FPA mechanisms in promoting sustainable fisheries.

CHINA

The People's Republic of China and the Republic of Guinea-Bissau established diplomatic relations on March 15, 1974. From March 1974 to May 1990, China and Guinea Bissau held an agreement on economic and technological cooperation. After an eight-year break during which Guinea-Bissau set up the so-called "diplomatic relations" with the Taiwan Authority, the diplomatic relations of China and Guinea-Bissau were restored on April 23, 1998. when the situation became relatively stable, and continues to this day. China has provided Guinea Bissau with the construction of a stadium, hospital and rice-technique promotion station. Food aid support has been received, plus some fisheries investment capital. At present, the projects now in execution consist of bilateral agro-technological cooperation, housing, power-generating equipment and technical cooperation and a bamboo-weaving technical cooperation project. China also signed with Guinea Bissau an Agreement on fishery cooperation. In 2002, the trading value of the two countries reached US\$ 4.504 million, all being exports from China to Guinea Bissau.

WORLD BANK

World Bank strategy is generally guided by a Country Assistance Strategy (CAS). This is tailored to the needs and circumstances of each country and lays down the World Bank Group's development priorities, as well as the level and type of assistance the Bank will provide for a period of three years. A Country Assistance Strategy (CAS) for Guinea-Bissau was approved in 1997, but was abandoned as a result of the civil war of 1998/99. An interim support strategy is now planned for presentation to the Board for approval in 2005. This emphasizes economic recovery, rural development and rehabilitation of the social sectors.

In December 2000, a three-year (2000-03) arrangement was approved under the Poverty Reduction and Growth Facility (PRGF). This arrangement also paved the way for other donors to resume budgetary assistance to the country, including two key programs for demobilization, reinsertion and reintegration and for arrears-clearance, supported by the World Bank, the EU and bilateral donors. The program aimed at consolidating, and building on, the achievements under the post-conflict program.

A Structural Adjustment Program promoted by the World Bank has provided incentives for rice production by withdrawing the State from productive and commercial activities. With the privatization of public rice production and marketing enterprises, the private sector has developed capacity for production, marketing, and processing and the impacts are now visible in terms of competition, quality and quantity of rice produced.

The current portfolio of World Bank support consists of four projects closely aligned with national development strategy: Basic Education, National Health Development, Private Sector Rehabilitation and Development (PSRD), and HIV/AIDS Global Mitigation Support, which was approved on June 2 2004. In August 2003 the Board of Directors approved a partial restructuring of the portfolio under the Basic Education and PSRD projects, to help meet the country's urgent social and economic needs after the conflict.

In the meantime the World Bank and GEF also launched, in late 2004, the Biodiversity Management (BM) project, endowed with a financial envelope of US\$11.11 million. This is focusing primarily on the protection and conservation of the biodiversity heritage of the Guinea Bissau coastal environment, including activities relevant to the fisheries sector. It has supported the development of the Marine Protected Areas.

The Bank has also worked with the government to prepare a public expenditure review in 2004. As of August 2004 the World Bank had approved a total of 28 credits for Guinea-Bissau, totalling about US\$302.8 million equivalent. Total disbursements have been about US\$277.2 million equivalent. One of these is a project aimed at upgrading the capital's main roads and drainage system. In addition, a National Land Management Plan is being created by the Ministry of Social Equipment in collaboration with other ministries.

The International Finance Corporation's (IFC) current portfolio consists of an investment of US\$0.28 million in the financial sector to support a commercial bank (Banco da Africa). No new investments have been made since 1998.

1.5 BUDGETARY AND FINANCIAL FRAMEWORK

The evolution of national Budgeted revenue and expenditures over the period 1999 to 2002 is shown in Tables 3, 4 and 5 respectively.

Table 3 : Key Revenue Sources 1999-2002

	1999	2000	2001	2002
	Thousands of Euros			
Budgetary revenue	36.420	45.001	43.494	33.030
Tax revenue	19.544	26.744	22.447	18.105
Direct taxes	2.790	4.807	4.224	3.483
Income taxes	2.738	4.775	4.163	3.483
Business	1.047	2.651	2.020	1.646
Individual	1.680	2.108	2.102	1.810
Rental income	793	986	1.060	910
Salaries	887	1.124	1.044	899
Complementary tax	793	12	14	8
Capital tax	9	3	27	20
Other income tax	2	0
Property tax	52	30	61	..
Indirect taxes	16.754	20.985	17.548	14.621
Tax on goods and services	5.578	8.229	7.531	7.549
Special consumption tax (IEC)	1.970	2.194	2.215	2.095
On imports	633	1.872	1.941	2.095
On local production	1.337	320	274	...
General sales tax	3.608	6.035	5.316	5.455
On imports	3.294	5.116	3.945	4.072
On local production	314	921	1.371	1.383
International trade	10.699	12.659	9.859	6.862
Import duties	3.726	5.644	3.672	3.334
Export taxes	4.952	6.351	5.804	2.429
Port services charges	2.021	665	383	265
Other	0	953	674	835
Other taxes	477	96	159	209
Non-tax revenue	16.876	18.257	21.047	14.925
Business and property income	512	602	2.971	..
Fees and duties	13.204	12.708	12.021	13.255
Fishing licences and compensation	13.117	11.624	11.327	12.923
Other fees	392	1.085	694	332
Civil servants social security contributions	383	0	0	567
Other non-tax revenues	2.778	4.947	6.055	1.102

Source : Guinea Bissau Ministry of Economy and Finance; Exchange Rate €1=CFA655.957

Table 4 : Key Revenue Sources 1999-2002 (%)

	1999	2000	2001	2002
	% of total revenue			
Tax revenue	53.7	59.4	51.6	54.8
<i>Of which</i>				
Income taxes	7.5	10.6	9.6	10.5
Taxes on goods and services	15.3	18.3	17.3	22.9
Taxes on international trade	29.4	28.1	22.7	20.8
Non-tax revenue	46.3	40.6	48.4	45.2
<i>Of which</i>				
Fishing licences and compensation	35.2	25.8	26.0	39.1

Source : Guinea Bissau Ministry of Economy and Finance

Table 5 : Economic Classification of Current Expenditures, 1997-2002

	1997	1998	1999	2000	2001	2002	Average 1997 - 2002
	% of GDP						
Wages and Salaries	3.1	4.7	5.2	6.8	7.5	7.4	5.8
Expenditure on Goods and Services	3.3	3.9	3.4	5.2	2.8	4.1	3.9
<i>Of which</i>							
Gasoline	0.2	0.2	0.2	0.4	0.2	0.1	0.2
Electricity and Water	0.2	0.3	0.3	0.3	0.1	1.0	0.4
Food and Housing	0.6	1.8	1.6	2.8	1.1	1.5	1.8
Transfers	2.9	4.3	3.8	3.4	4.5	4.8	4.2
o.w. Civil Servants and Private Sector	0.8	1.3	1.2	1.3	1.9	1.8	1.5
Others	0.6	5.8	9.1	12.5	4.5	0.8	6.5
Interest payment on debt	4.2	1.0	0.8	5.7	8.4	4.3	4.0
TOTAL	14.1	18.8	22.3	33.8	28.2	21.4	24.5

A marked feature of the revenue structure in Guinea-Bissau is that it is heavily concentrated on two main sources: revenues from fisheries access (including compensation) and export taxes on international trade (mostly cashew nut exports). This concentration is a source of concern, as the government may experience high volatility and seasonal effects in its revenues in a given year as a result of supply shocks.

With regard to the financing of the recurrent budget, overall current tax revenues (excluding grants and fisheries incomes) have not been enough to pay for recurrent primary expenditures over the post-war period. The tax system currently prevailing is archaic, complex, and mismanaged. Budgetary revenues are extremely low, both in relation to GDP and as a percentage of current expenditures. Despite having increased from around 12 percent of GDP in the first half of the 1990s to roughly 19 percent of GDP over the period 1999-2000, they are only sufficient to cover 85 percent of the government's current spending. As a result of the continuing deterioration in the government accounts, the suspension of debt relief by

some donors, and the limited sources of extra-budgetary revenues the government has accumulated significant arrears as indicated in Table 6. Liquidity is severely limited, and the Government has been unable to meet current commitments without intervention by the external partners.

Table 6 : Revenues and Expenditures, 1999-02 (in % of GDP)

	1998	2000	2001	2002
			(estim.)	(estim.)
Revenue	17.8	19.2	16.8	15.3
Expenditure	25.7	38.4	34.6	30.9
Overall Balance	-9.9	-10.8	-11.8	-12.2

Source: Guinea-Bissau authorities and IMF

1.6 NATIONAL DEVELOPMENT STRATEGY

The national development strategy is defined in the programmes of Emergency Post-conflict Assistance (EPCA, 1999-2000), Emergency Economic Management Plan (EEMP), the Government's Economic Program for 2004-08 and Poverty Reduction and Growth Facility (PRSP) supported by the World Bank.

The main development objectives up to the year 2015 consist of:

- Reduction of the extreme poverty index by half;
- Two-thirds reduction in infant mortality rates;
- Achievement of universal enrolment in primary education; Elimination of gender disparities in education (by 2005);
- Implementation, by 2005, of a strategy to reverse environmental resource trends by 2015

Guinea-Bissau presented its interim National Poverty Reduction Strategy Paper (I-NPRSP) for the period 2000-2003 in September 2000. The strategy provides an analysis of poverty. However, the weak availability of data, and lack of choice for effective implementation means, have hindered the formulation of a detailed and precise poverty reduction strategy. The Interim NPRSP includes a set of measures intended to enable sustained growth in per capita income, improve the living conditions of the population, and bring about a reduction in poverty. It also presents an implementation timetable and consultation procedures for preparing the full NPRSP.

The Interim NPRSP is promoted by the SSEFAP but the PRSP process is seriously delayed as a result of a lack of local commitment. The last elected government approved a draft PRSP by mid-2004, and a final version was expected to be ready for submission to the international community by end-2004. The political situation did not allow its completion. Government is under pressure from the international organisations (e.g. WB and IMF) to prepare a final version. Furthermore, the PRSP process appears to be a parallel and uncoordinated planning exercise. There is a broad lack of integration between the PRSP process and the sectoral plans in the areas of health, education and economic restructuring. An example is the case of fisheries, which is only mentioned in the IPRSP in terms of generalities in "Creating Conditions for Rapid and Sustainable Growth":

"Agriculture will continue to be the main source of growth, together with fisheries, tourism, and forestry resources. With a view to attaining real growth of roughly 9 percent a year,..... the Government's strategy is to strengthen agricultural policy in order to improve the standard of living of the people, which entails (i) updating the Letter of Agricultural Development Policy and the Action Plan for its implementation, to

be concluded by September 2001; (ii) publishing the Fisheries Law in October 2000; and (iii) approving the action plan for implementation of the Land Law, which will increase small farmers' access to land"

As a result the PRSP process lacks a sense of government ownership and the process appears to be stalled pending the emergence of political entities with a mandate and the focus to re-address the policy framework for poverty reduction.

Against this background, the new government prepared an economic programme for 2004-08. The programme aimed at strengthening the fiscal position and pursuing structural reforms to boost growth and reduce poverty. These medium-term policies focus on boosting economic growth through structural reform, deregulation and other measures to strengthen Guinea Bissau's external competitiveness in the context of the fixed exchange rate system of the West African Economic and Monetary Union. Other key reforms will be improving the investment code, strengthening the legal system, pursuing the privatization program, and rebuilding the banking system.

Overall, the development strategy requires higher resource inputs than Guinea Bissau can mobilize domestically, and is not fully coordinated within a donor matrix. The lack of macroeconomic stability has given the entire Government programme a bias in favour of rent-seeking and fast profits, whilst credits to the government are used mainly to cover the budget deficit. It is not clear how future progress towards the development objectives are to be financed. Combined with the lack of technical skills and implementation and management capabilities in the public sector, the medium term prospects for meeting the national development objectives look poor.

1.7 MACRO-ECONOMIC FRAMEWORK

The situation at independence was that of a region whose poorly developed economic base and infrastructures were devastated by war. Following independence, centrally planned policies led to high external debt, inefficient public enterprises, and stagnating economic growth. A non-convertible currency led to a dependency on foreign donations, external aid and international development projects in all sectors, including fisheries. Structural reforms toward a market-oriented economy began in the mid-1990s, supported by an IMF Staff Monitored Programme (SMP) (1993–1994) and under the Enhanced Structural Adjustment Facility (ESAF) (1995–1998). However good economic progress during that period was lost in the widespread destruction that occurred during the conflict in 1998 - 1999.

Consequently, the country's macroeconomic performance and fiscal stance continue to deteriorate. Guinea-Bissau remains a very poor country, with a single cash crop, no industrial base, and an unattractive investment climate characterized by continuing political instability, many regulations, widespread corruption, and an expensive and unreliable infrastructure. The basic macro economic indicators are shown in Table 7. Agriculture accounts for more than 50 percent of GDP, 85 percent of employment, and virtually all exports (see Table 8). The remaining GDP comes mainly from trade and the government sector because successive governments have signally failed to diversify the economy.

Table 7 : Basic economic indicators

Indicators	1999	2000	2001	2002	2003
GDP at market prices (in billions of CFA francs)	138.2	153.4	145.9	141.9	138.7
GDP per capita (in U.S. dollars)	224.5	215.5	199.0	203.6	238.6
Exports of goods and services (In millions of US dollars)	55.7	68.5	57.3	60.9	70.8
Imports of goods and services (In millions of US dollars)	-96.1	-111.2	-125.9 4	-104.5	-104.
Total revenue and grants (In millions of CFA Francs)	30.0	51.1	45.6	30.4	32.2
Total expenditure and net lending (In millions of CFA Francs)	43.3	67.7	60.6	46.7	51.4
Overall balance (cash basis) (In millions of CFA Francs)	-5.2	-137.2	-14.9	-3.0	-1.8
External public debt (In millions of U.S. dollars)	762.3	776.9	853.3	915.2	917.8
Balance of payments, Current account (In millions of US dollars)	-5.6	-12.1	-44.4	-21.7	-5.4
Rate of inflation (last month in each year)	-7.9	16.7	-1.9	2.5	0.7

Source: Guinea-Bissau: Selected Issues and Statistical Appendix, IMF, March 2005

However, one exception to the generally poor macroeconomic performance is that, due to Guinea Bissau's membership of the UEMOA, appropriate monetary policies in the hands of the independent Banque Centrale des Etats de l'Afrique de l'Ouest have delivered low inflation.

Guinea-Bissau's informal market is relatively large and it eclipses the formal market, and makes economic statistics difficult to interpret. According to the Economist Intelligence Unit, there is an active trade in smuggled diamonds from Guinea-Conakry and Liberia. Much of a thriving regional trade in food products (including fishery products) is unrecorded. Fishery products account for only a minimal percentage of exports. However, the statistical basis for the data is suspect when compared with EUROSTAT data (see Section 2.8) suggesting that fishery products accounted for about 8% of exports in 2003. Fishery products could potentially contribute significantly more to the balance of payments.

Table 8 : Primary commodity exports in US\$

	1999	2000	2001	2002	2003
	Millions of US\$				
Total merchandise exports	51.2	62.1	550.0	53.6	62.2
Agricultural products	49.2	60.7	48.5	49.0	56.7
Groundnuts	0.0	0.0	0.0	0.0	0.0
Cotton	0.3	0.5	1.3	1.6	0.9
Cashew Nuts	48.6	59.8	47.2	47.3	55.7
Other	0.2	0.3	0.0	0.0	0.0
Fish products	0.8	0.2	0.8	0.2	0.2
Fish	0.2	0.0	0.0	0.1	0.1
Shrimp	0.6	0.1	0.8	0.0	0.1
Other	0.1	0.0	0.0	0.0	0.0
Wood products	0.0	0.4	0.4	0.9	0.9
Sawn wood	0.0	0.1	0.0	0.6	0.6
Logs	0.0	0.3	0.4	0.3	0.3
Other	0.0	0.0	0.0	0.0	0.0
Miscellaneous	1.1	0.8	0.2	3.6	4.5

Sources : Central Bank of West African States (BCEAO) and IMF

Guinea-Bissau's debt situation is unsustainable and the country is one of the most indebted poor countries in the world. The average external debt-to-GDP ratio was 293 percent in the 1980s and increased further to on average 352 percent in the 1990s. The debt initially resulted from large investments in government-owned enterprises during the first ten years after independence. Total scheduled debt service was estimated at US\$44 million (19 percent of GDP) in 2003 when the ratio of debt to GDP was estimated at close to 400 percent of GDP and scheduled debt service at 20 percent of GDP. China and Cuba cancelled all official debt, while Italy has forgiven US\$60 million in arrears as of December 2000. Interim debt relief under the HIPC Initiative was halted by most creditors after the PRGF-supported program went off-track. There are no arrears to the IMF, but debt service to most bilateral creditors continues to be high. Trade deficits and foreign debt are currently financed by inflows of foreign aid, from the international donor community, and Portuguese capital transfers. The country could therefore potentially benefit from the current round of external debt relief being considered by the G8 Group. However, it would have difficulty meeting the governance criteria in the short term.

The PRSP objectives for 2000-2003 aimed to (i) accelerate annual real GDP growth to about 9 percent on average during the period, from the nearly 8 percent reached in 1999; (b) reduce annual inflation within the UEMOA framework; and (iii) contain the fiscal and external sector deficit within financially sustainable levels.

1.8 SOCIAL POLICY

Table 9 shows a summary of the UN HDI Indicators for Guinea Bissau. Average life expectancy is 45 years, marginally less than the sub-Saharan African average. The gross national income per capita is extremely low at US\$337. The gap between cities and the countryside is relentlessly widening, with a notable gap between the narrow social segment that continues to accumulate riches, and the disenfranchised poor living on subsistence incomes. As in other countries of the West African states, the Guinea Bissau economy is based on subsistence agriculture, livestock and fisheries, which are inadequate to allow significant improvement in the living conditions. West Africa in general, and Guinea Bissau in

particular, are deeply affected by changes in export commodities prices. Prices for the main export crop - cashews, are in decline, having a significant impact on rural livelihoods.

More than one in ten infants die before their first birthday. In this context, it is highly unlikely that Guinea Bissau will be able to achieve the millennium development goals (MDGs). Health indicators in Guinea Bissau are amongst the poorest in Africa, with malaria being especially prevalent. Immunization coverage rates dropped dramatically after the 1997/98 conflict. The disease profile found in the country today places the entire country at risk from a range of diseases. The official estimate for HIV/AIDs infection is 3% but experts put it closer to 7%, much of it found in the economic corridor leading to Senegal.

The education sector, just like other sectors in Guinea-Bissau, is in a dire situation. The sector is facing a host of serious difficulties and urgent challenges stemming from lack of adequate supply of education services; large disparities in access to education; insufficient human and financial resources; and weak institutional capacity. The schooling environment is highly inadequate. Many schools were destroyed during the civil conflict in 1998 and the number of schools in rural areas, where the majority of the population lives, is grossly insufficient. Classrooms are often overcrowded with almost no learning materials and most teachers have to teach a second shift to accommodate a raising number of new enrollees. Secondary education is limited to a few schools mostly located in Bissau (gross enrolment rate in secondary education is only 20%). As in the case of the Health sector, Guinea Bissau is not on track to achieve the Millennium Development Goals in the Education sector by 2015.

Table 9 : UN HDI Indicators for Guinea Bissau

Development indicators	Guinea Bissau	Sub-Saharan Africa
HDI rank	172.00	
Life expectancy at birth (years) 2002	45.20	46.30
Adult literacy rate (% ages 15 and above) 2002	39.60	63.20
Combined gross enrolment ratio for primary, secondary and tertiary schools (%) 2001/02	37.00	44.00
GDP per capita (PPP US\$) 2002	710.00	1,790.00
Life expectancy index	0.34	0.35
Education index	0.39	0.56
GDP index	0.33	0.48
Human development index (HDI) value 2002	0.35	0.47

Source: UN, HDI, 2004

The social objectives of Government are promoted by the Secretariat of State of Employment and the Fight Against Poverty (SSEFAP) in collaboration with the Ministry of Health and the Ministry of Education. Health and education are the main social expenditures, but inadequate financing is severely limiting the impact of the existing health and educational systems. While initially designed as a budget financed health system (PNDS 1997), health financing in Guinea Bissau has evolved to where it now has multiple sources of financing: the Government, donors and patients via official and unofficial user fees. Donor financing in particular, has increased dramatically between 2001 and 2002 and plays an important part in financing both recurrent and capital expenditures of the health system. However lack of clear policy and coordination framework for delivery of assistance severely limits effectiveness of the financed programmes.

1.9 BUSINESS AND INVESTMENT CLIMATE

Attempts to centrally plan the economy prevailed until the beginning of the 1990's, blocking the development of the private sector in the provision of services, promoting flight of capital. The Investment code was revised and published in Decreto-Lei n° 4/91 of 30 September 1991. The investment code provides incentives for investment and guarantees against nationalization and expropriation. The International Monetary Fund reports that both residents and non-residents may hold foreign exchange accounts with permission of the Banque Centrale des Etats de l'Afrique de l'Ouest (Central Bank of West African States, or BCEAO). Capital transfers to members of the Union Economique et Monétaire Ouest Africaine (UEMOA) are unrestricted, aside from direct investments. However, the government must approve most personal capital movements between residents and non-residents, such as personal loans, gifts or inheritances, or transfer of assets. Taxes on business incomes are 39% of profit.

Current policy considers the private sector as the engine of growth and development. The IFC of the World Bank has promoted a strategy which aims at improving the business environment and privatization of public enterprises. To this end the WB is supporting the Private Sector Rehabilitation and Development Project (PSRDP) for Guinea-Bissau. There are three project components. The first component supports and/or prepares the reform of telecommunications, air transport, port, water, and energy sectors. The second component helps implement legal reform by modernizing business laws and making fair and equitable justice more readily available to individuals and private enterprises. Activities include improving institutional capacity in the main tribunal of Bissau, which handles most of the business cases; harmonization of national laws with the Organization for the Harmonization of Business Laws in Africa (OHADA); and providing complementary training and technical assistance to strengthen the judicial system and the legal profession. The third component supports implementation, monitoring and evaluation.

The investment code is also currently under revision. The revised code will integrate much of UEMOA Investment Code. The draft likely to be passed foresees import duty exemptions on the import of production equipment materials, tax holidays, and drawback rights. In addition export taxes (for example on cashews) are separately being reduced or eliminated to promote more export. Much of the fiscal and commercial law, adopted piecemeal over the past century, is in the process of modernization and simplification.

However a number of factors obstruct the implementation of this strategy. The tax system currently prevailing is still archaic, complex, and mismanaged. There is a large number of small taxes (the so-called *alvaras* or working permits), and numerous ad hoc municipal taxes. Added to the extremely low technical capacity of government staff, the direct taxation system remains ineffective, with a revenue performance below the regional average, and arbitrary.

Vestiges of the centrally planned economy still inhibit private sector development. For example, local fish pricing regulations in Bissau currently combine social objectives (low fish prices for first sale of fish landings received from industrial and semi-industrial fisheries) with political patronage. Fish traders operate a cartel, strongly discouraging new entrants and limiting fish distribution.

Land tenure is another difficulty faced by investment. By law, land belongs to the state. Today's existing land law belongs to the colonial period (1961). Traditional tribal laws prevail in rural areas and often contradict the statutory law. Land can not be used as a guarantee for any type of investment and rental agreements cannot be enforced in the courts. Land is obtained and used under Concession Authorization for a pre-established period of time. New law has been put together and approved by the People's National Assembly in 1998, but its enforcement needs to be adjusted, regulated and promulgated in all the country's eight administrative regions. A US\$300,000 FAO financed project will support land reform and a new law is expected, probably in 2006.

Domestic and external debt burden creates additional uncertainty for investors (in that the country will have financial capacity to authorize the remittance of profits and provide foreign exchange for the necessary imports). The financial sectors are inefficient, slow and corrupt and in addition there are few commercial banks. Therefore the sector remains undeveloped, inefficient and inaccessible to most savers

and credit-seekers. Direct taxes such as customs revenues are high and applied arbitrarily, and there is a lack of market infrastructure, of a skilled workforce, and of defined and enforceable property rights that would give means of legal redress. However, the over-riding concern is the lack of stability and the corruption, ensuring that investment in Guinea Bissau is a high risk activity. According to the Economist Intelligence Unit:

“the greatest risk [for investors] arises from the country’s political instability, depressed business environment, periodic inability of the government to honour its financial and commercial obligations, and slow, weakly functioning local institutions on which investors or other foreign parties may depend. Enforcement of contracts cannot be assured through the local justice system.”

1.10 ENVIRONMENTAL POLICY

1.10.1 Environmental policy

Guinea Bissau has a rich and diverse natural environment. Inlets indent the flat coastal areas, which are covered with mangrove swamps, low-lying jungle and grassland. The coastal zone with extensive amounts of mangroves, provides habitat for a wide range of species. The lowest areas are occasionally submerged by high tides; floods have been known to cover a third of the country. The islands of the Bijagos Archipelago are home to woodland and mangroves. Guinea-Bissau's wildlife includes a vast diversity of birds, primates, other large mammals, lizards and butterflies.

The main environmental issues to be addressed are related to the marine and coastal environment, with concerns over reduced fish stocks, loss of mangrove habitat, coastal erosion and threats to biodiversity. Increased rice production low-lying coastal zones and cutting of mangroves for fuel wood are of particular concern and directly related to subsistence livelihoods.

Environmental protection falls within the competence of a confusing range of institutions and authorities (Ministries of Environment, Agriculture, Fisheries, Forestry, and the Military) with weak cross-departmental coordination, if any. In an attempt to address this problem IBAP (Instituto de Biodiversidade e Areas Protegidas) was created in December of 2004 under the tutelage of the Ministry of Agriculture, and with World Bank support (see below). It is responsible for policy formulation, management and surveillance of protected areas.

The environmental legal framework is also considered to be weak. There is no specific Environmental law in Guinea Bissau. Environmental protection measures are expressed in several distinct legal acts, with little coherence between them. These laws include:

- Lei quadro das áreas protegidas (does not include MPAs)
- Lei da Terra (Law of Land)
- Lei Florestal (Law of the Forest)
- Lei da Caça (Law on Hunting)
- Lei Geral das Pescas (General Law on Fishing)

The Environmental framework is supported by two main plans:

- National Strategy and Action Plan for Biological Diversity and Conservation, (Estratégia Nacional e Plano de Acção para a Conservação da Diversidade Biológica na Guiné-Bissau) of 2002; This plan emerged from the signature of the Convention on Biological Diversity in 1995 and consists of an audit of the natural resources and environmental conditions in Guinea Bissau, presenting

very briefly the strategies and actions for solution of the problems identified. The Project for the Conservation of Fragile Ecosystems was approved for implementation.

- National Environmental Management Plan, (Plano Nacional de Gestão Ambiental); The plan contains descriptions of objectives and targets across all sectors including “Participative management of natural resources” and “Preservation, Protection and Conservation of natural and biological resources”. It also presents costed action plans to address all environmental issues. The document outlines a range of 14 national programmes. Programme 10 describes the national programme for the sustainable utilisation of marine and coastal zone resources.

In relation to the marine environment, the key approach employed is the concept of Marine Protected Areas, and several have now been created, with extensive support of the IUCN and the World Bank. These include the Orango Islands National Park and the Poilão Marine Park, both within Guinea-Bissau's premier protected area, the Bolama-Bijagos Biosphere Reserve. The Cacheu Natural Park near Senegal and the Cantanhez Natural Park in the south protect mangroves and forest. Near Buba, the Cafada Natural Park shelters a freshwater wetland area. Several future projects are described in general terms in the Management Plan.

1.10.2 Donor activity in environmental protection

International Union for the Conservation of Nature (IUCN): The World Conservation Union commenced operation in Guinea Bissau as of 1988, when it was asked by the Government to develop a Coastal Planning Programme and a *Plano Director*. Most of this work was financed by the Swiss National Development Agency, and led to the identification of a number of national parks, protected areas, and the Biosphere Reserve. The *Plano Director* made three main recommendations:

- 1) Creation of terrestrial protected areas
- 2) Definition of artisanal marine fishing zone; launch fisheries surveillance
- 3) Definition of coastal zones for CZM purposes on a regional basis

FIBA: *Fonds d'Investissement du Banc d'Arguin* is a French NGO whose main interest is the protection of marine fowl, and whose main work is focused around the Banc d'Arguin National Parc in Mauritania. FIBA has recently invested in two 6.4m 75HP fibreglass patrol boats for Joao Vieira Poilao and Orango MPA patrolling, and is actively involved in supporting the management efforts of the two MPAs.

WB CBMP: Development of the World Bank Coastal and Biodiversity Management Project started in 2001, and the creation of IBAP is a direct result of the intervention. IBAP is the institutional counterpart through which the project is executed. CBMP is a US\$11.1 million project which aims at putting in place a management framework for the coastal zone and resource conservation, mainly through the following two project components; A) Protected Areas and Threatened Species Management, and B) Natural Resource Management. It began implementation late in 2004. One project proposed under the CBMP provides for decentralised MCS bases and marine patrolling at a value of US\$5,942,624, and the World Bank is currently advising the Government of Guinea Bissau on the strengthening of fisheries MCS systems.

1.10.3 Adherence to international environmental treaties

Membership of Guinea Bissau in environmental treaties and conventions is summarised as follows, according to present status:

Table 10 : Environmental Conventions to which Guinea Bissau is party

CONVENTION	STATUS
The UN Framework Convention on Climate change;	Acceptance
The Convention on Biological Diversity	Party
The Vienna Convention for the Protection of the Ozone Layer as well as the additional Montreal Protocol;	Acceptance
The Rotterdam Convention on Prior Informed Consent	Signed
The UN Convention to Combat Desertification;	Signed
Convention on International Trade in Endangered Species of Wild Fauna and flora (CITES);	Accession
Conservation Measures for Marine Turtles of the Atlantic Coast of Africa	Signed MoU
Stockholm Convention on Persistent Organic Pollutants	Signed

1.11 REGIONAL POLICY

The territory is organised in five zones - North, East, Centre, South and Islands. Each zone (apart from the islands) has two administrative regions, a total of nine in all, each with a regional administrative capital. These are: shown in Table 11. The administrative regions form the electoral collage for the election of the President. Municipal districts within each region form the basis for election of deputies to the National Assembly. There are no regional governments, although there are regional delegations of governmental agencies and departments as for fisheries. The democratisation of the country's political system, with the introduction of multi-party elections, and the coming municipal election campaign, should create favourable conditions for a new urban management approach. At present there is only one Municipal Council whose president was appointed and not elected.

Table 11 : Regional administrative structure and population distribution of Guinea Bissau

Region	capital	Area (Km2)	Population	%	Population Density
Guinea-Bissau		36,125	1,326,039		36.7
Bissau	Bissau	77.5	371,667	28	4795.7
Bafatá	Bafatá	5,981.1	186,252	14	31.1
Gabú	Gabú	9,150.0	182,063	14	19.9
Biombo	Quinhámel	838.8	64,154	5	76.5
Cacheu	Cacheu	5,174.9	166,158	13	32.1
Oio	Farim	5,403.4	181,018	14	33.5
Bolama/ Bijagós	Bolama	2,624.4	28,043	2	10.7
Quinara	Quinara	3,138.4	52,916	4	16.9
Tombali	Catió	3,736.5	93,769	7	25.1

There are four major cities in the country, Bissau, Bafatá, Gabú and Bolama, all of which lack resources and basic infrastructure to meet the increasing needs of their populations. Steps have already been taken to improve the quality of human settlements, particularly in Bissau. An Urbanisation Plan has been developed in collaboration with the Portuguese government, notwithstanding the lack of financial resources for its implementation. In addition, a project to upgrade the capital's urban infrastructure, including the city's transportation system, the drainage system for pluvial waters and construction of additional public drinking fountains, has also been implemented with cooperation assistance from the However, there is no rural development policy, and little attention has been given to the development of rural areas, with the result that although conditions in the cities are poor, there is an increasing gap between cities and the countryside.

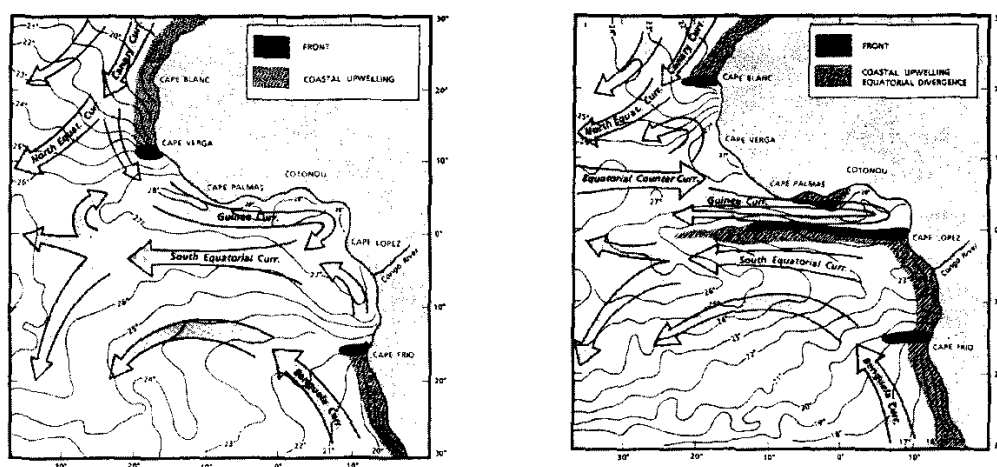
2 ANALYSIS OF FISHING SECTOR AND INDUSTRY

2.1 CHARACTERISATION OF COASTAL WATER BODIES

2.1.1 Oceanographic features

Guinea Bissau is a coastal West African state located between Guinea Conakry and Senegal, approximately 11° to 12° north of the equator, and well within the tropic of Cancer. The oceanic conditions in the region are described by Schneider (1990)⁵. In the tropical regions of the Atlantic a stratum of warm water of low salinity overlies a cold water mass of south Atlantic waters, with the masses separated by a discontinuity layer (thermocline and halocline), usually relatively close to the surface. The interactions of the seasonal vertical movements of the thermocline with the continental shelf, and the confluence of the wind-generated Canary and Guinea currents, result in coastal upwellings of the colder nutrient-rich waters. A seasonal frontal zone is defined by the movements of this coastal upwelling, between Cape Blanc in Mauritania (in the north) and Cape Verga in Guinea Conakry (to the south). The frontal zone therefore oscillates across the EEZ of Guinea Bissau. This upwelling system gives rise to one of the highest reported primary productivities in the world – fuelling a food chain that gives rise to a highly diverse and abundant marine fauna. In the region, only Mauritania, as part of the same system, is believed to be endowed with more productive waters. Figure 1 shows the frontal movements of the upwelling systems in the region.

⁵ Field guide to the commercial marine resources of the Gulf of Guinea. FAO Species identification sheets for fishery purposes, Wolfgang Scheider, FAO Regional Office for Africa, FAO 1990

Figure 1 : Seasonal variations in surface currents and upwellings in the Gulf of Guinea

Note : The above Figure relates to the period January (left) and July (right).

Source : Schneider (1990)

2.1.2 Coastal topography

The continental shelf is substantial in the region of Guinea Bissau, covering an estimated 37,191 square kilometres. The coastline is defined by numerous wide estuaries, with extensive inter-tidal mudflats and sandflats not covered by seawater at low tide. The estuarine nature of the coastline makes it difficult to assign a figure as to its length. Commonly quoted figures are in the range of 250 to 280 kilometres. When taking into account brackish waters stretching up into the estuaries, the actual coastline is well above 1,000 kilometres in length.

Out of an EEZ of some 86,400 square kilometres (being the area situated outside the 12nm zone) approximately 38,750 square kilometres of Guinea Bissau waters are located within the 200m isobath. On top of the vast continental shelf is located the Bolama-Bijagós archipelago, which is of volcanic origin. The Bijagós Archipelago consists of approximately 80 islands, of which only 21 are permanently inhabited. The archipelago occupies an area of approximately 11,000 square kilometres. Sand banks and mud flats make up a large part of the area. In April 1996, the Bijagós Biosphere Reserve was created (with UNESCO support) to protect the unique natural resources, biodiversity and high natural productivity of the region.

Surface areas of the different zones are shown in the following table.

Table 12 : Surface areas of different coast zones within the Guinea Bissau EEZ

Area	Isobath	Square kilometres
Internal waters (including projected island surface areas):		14,400
All waters	50m	31,830
All waters	200m	38,750
Baseline	12nm line	6,085
Baseline	50m	17,430
Baseline	200m	24,350
12nm line	50m	11,345
12nm line	200m	18,265
50m isobath to 200m isobath:		6,920

2.1.3 Legal extent and characteristics of the EEZ

Delimitation of the EEZ

Guinea Bissau has a border with Senegal to the north, and Guinea to the south. Guinea Bissau's shoreline runs in a south easterly direction, from *Cape Roxo* in the north west, to the borderline with Guinea, 37.5nm north-west of *Cape Gonzalez*. Guinea Bissau's waters are characterised by an offshore archipelago, affording the country a forward baseline, encompassing all of the islands forming the archipelago. The surface area of the internal (or archipelagic) waters located behind the baseline as currently defined, equates to some 14,400 square kilometres (including the surface area of islands and inlets of coastal estuaries).

Guinea Bissau's EEZ border with neighbouring states has been established by bi-lateral agreement with Guinea (February 1985 by Arbitral Panel Award), whereas the northern boundary remains a contentious issue with neighbouring Senegal. The original sea-boundary agreement between Senegal and Guinea Bissau was established under colonial rule in an exchange of notes between France and Portugal in April 1960. It defined the maritime border as a straight-line 240° azimuth (assumed to be from true north) from "the intersection of the extension of the land boundary and the low-mark, represented for that purpose by the Cape Roxo light." The outer limit of the territorial sea boundary was not specified.

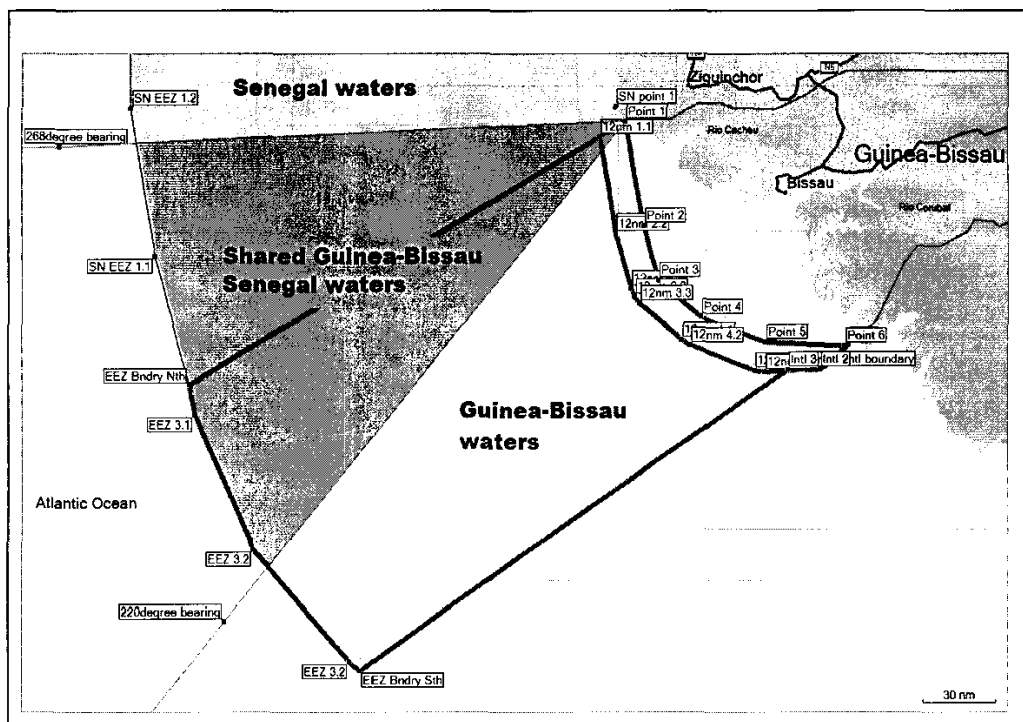
After independence, Guinea Bissau contested the 1960 boundary agreement, which was however upheld by a July 1989 Arbitral Tribunal Award. Guinea Bissau then moved on to contest this award before the ICJ, claiming a maritime boundary running at 268° azimuth from *Cape Roxo* light. This led to the signing of an agreement between Guinea Bissau and Senegal in October of 1993, in which both parties agree to a contested grey zone between both states, wedged between the boundaries running at 220° azimuth and 268° azimuth from *Cape Roxo* light. This was followed by a protocol agreement in June of 1995, establishing a supra-national agency (AGC) charged with the management of the maritime resources in the grey zone.

In 1997, and with respect to fisheries resource exploitation, the agency claimed a percentage share of fisheries access agreement compensations of both States, as well as a percentage share of the proceeds from arrested and fined fishing vessels. No information as to whether these arrangements are respected in practice could be collected during the mission.

The map in Figure 2 draws the current configuration of the contested zone between Senegal and Guinea Bissau, in which the exploitation of living and mineral marine resources can be undertaken by both parties. By way of the terms established in mutual agreement by both parties in 1997, this means that fishing vessels licensed in Senegal can sail and operate all the way south to the 220° azimuth line, while vessels registered in Guinea Bissau are entitled to fish all the way up to the boundary delimited by the 268° azimuth line. In geometric terms, this means that 33.6% of Guinea Bissau's EEZ (29,400 square kilometres) can be exploited by all fishing vessels licensed in either country. Only 5% of the highly

resource-rich waters lying outside the 12 nautical mile zone, and within the 50m isobath (574 square kilometres),⁶ fall within this grey zone. Senegal, being the poorer country in terms of living marine resources, is the clear beneficiary in this arrangement.

Figure 2 : Contested zone between Senegal and Guinea Bissau.



Note: The Contested zone between Senegal and Guinea Bissau. 268° and 220° azimuth lines out of Cape Roxo (Point 1) are indicated, with the grey zone located between Senegal and Guinea Bissau EEZs. The map also shows the baseline (points 1 to 6) and the twelve nautical mile zone, as well as the entire EEZ of Guinea Bissau. 12nm zone line and EEZ zone line are indicative only.

A bilateral Agreement with Senegal was signed in 1978, providing for fisheries management and access in a shared zone. This is considered in the next section. In respect to fisheries resources, it is the law of Guinea Bissau which is applicable to the joint zone. The Agence de Gestion et de Cooperation between Guinea-Bissau and Senegal (AGC) is charged with the management and law enforcement and coordination of the natural resource exploitation regimes in this zone. However, it lacks most of the means required to accomplish its mission. In theory the AGC is supposed to receive a proportion of licence fees from the two states. However, there is no sign that such payments are made. There is no evidence of a separate fisheries management regime existing in the AGC zone.

The nature of the zone means that the main fisheries activities undertaken will be oceanic (purse seine and Surface Long line segments). However, there may also be some trawl activity. There is no information on the proportion of catches by GB licensed vessels caught within the zone.

2.1.4 Principal maritime resources

The main resources are fish and oil. There are no other significant maritime industries.

⁶ Accessible to industrial fishing vessels

2.1.4.1 Oil industry resources

2.1.4.1.1 History of oil exploration

Exploration has taken place since the early 1960's with a number of licensing rounds to promote the offshore acreage. There has been active exploration offshore of Guinea Bissau since the late 1960's when Esso drilled six wells. A number of international companies have been involved in offshore exploration during the last 40 years. These have included Esso, Elf, Pecten, Monument Oil and Gas (now Lasmo), Sipetrol of Chile, West Oil, Fusion Oil and Gas, Benton Oil and Gas and Petrobank Energy and Resources. With the election of President Koumba Yala in February 2000, another focus on the upstream oil industry took place. Guinea Bissau launched a licensing round at the end of 2001, following encouraging seismic data.

However the area offshore can be considered under-explored as only 10 wells have been drilled in this area during 40 years of exploration. Current production is insignificant. The entire basin contains known source potential with the central portion of the area being the most promising. Oil industry Development takes place under two regimes – the joint regime under the Treaty with Senegal and the national regime. The oil exploration blocks are shown in Figure 3.

The development of the oil industry has been hampered by civil unrest and border disputes with neighbouring Senegal. Furthermore, responsibility for both environment and the national petroleum development company (Petroguin, previously Petrominas) fall within the Ministry of Natural Resources and Environment, thus creating a potential conflict of interest that could hinder the sustainable management of coastal biodiversity.

In addition, relative costs of oil exploitation are high in RGB due to corruption, lack of operational shore based support infrastructure, high political risk etc. This has limited development until recent high prices have made the activities viable, and there is some considerable current interest in this sector.

Figure 3 : Oil exploration blocks



2.1.4.1.2 Dôme Flore and Dome Gea Oilfields

The Dôme Flore oilfield off the coast of Senegal and Guinea Bissau, 70 kilometres southwest of the Casamance river, has brought the two countries into regular conflict since it was discovered by the Total company of France in 1960. Its reserves are put at 100 million tonnes of heavy oil and only one million tonnes of light. After 16 years of legal battles and a few military skirmishes in 1991, the two countries opted for a pragmatic settlement of their territorial dispute and in October 1993 signed an agreement, ratified in 1995, to manage and develop their maritime resources jointly.

Since this time, resources of the disputed offshore border area are managed through the "Agence de Gestion et de Cooperation" (AGC). Under the terms of this agreement, the proceeds from activity in the joint mineral resource exploration area are divided between Senegal and Guinea Bissau in an 85:15 ratio. This area contains the Dome Flore and Dome Gea discoveries.

In March 2005, the Malaysian group Markmore Energy bought 55 per cent of the exploration rights of the Dôme Flore block (see Figure 3.), managed by the AGC, which has retained 15% of the shares. Markmore Energy plans to further survey the block this year, and to start exploratory drilling in 2006. Planned investments are estimated at US\$25 million. The development of the marine oil sector therefore finally appears to be a real prospect, with potential impacts on national economic development and on the marine environment.

2.2 ANALYSIS OF FISHERY RESOURCES AND ACTIVITY

2.2.1 *Main fishery resources*

Guinea Bissau waters are rich in fisheries resources, which fall within two distinct groups; the oceanic fisheries (large and small pelagic fish) and the coastal fisheries (principally demersal fishes, shrimps and cephalopods). The EEZ of Guinea Bissau is characterised by its extensive continental shelf, with shallow depths and suitable bottom conditions for trawling extending to significant distances from the shore. The 12 mile territorial zone exclusive to the small scale fisheries extends well into this area due to the forward base points selected in the Bijagos Islands.

2.2.1.1 *Crustaceans / Shrimp*

Crustaceans represent perhaps the most commercially important group in the fisheries of Guinea Bissau. According to recent research cruises⁷ crustaceans, a majority of which is shrimp, represent roughly 5% of the demersal biomass. It is noted however, that the trawl used during the research cruise was not specifically adapted for shrimp fishing, and this could lead to an underestimate of relative abundance. The other species present are the deep sea crab *Geryon maritae* (found exclusively at a depth beyond 200m) and the royal spiny lobster *Panulirus regius* (found exclusively at a depth less than 50m).

The species listed in Table 13 make up the vast majority of the shrimp group. Their relative abundance within this group, and their distribution within three different depth strata is also indicated. It is important to note that almost 45% of shrimp resources are found in the 10-50m depth stratum. Comparison with data from both the 1995 and 2004 research cruises suggests that these shrimp have diminished by some 50% in terms of biomass since 1995.

⁷ 2004 N/O Al-Awam demersal research cruise

Table 13 : Shrimp species recorded in June-July 2004 on demersal research cruise

Species	10-50m	50-200m	200-600+m	Relative abundance within shrimp group
	%			
<i>Parapenaeus longirostris</i>	-	28.82	14.04	42.86
<i>Aristeus varidens</i>	-	-	2.63	2.63
<i>Penaeus monodon</i>	4.51	-	-	4.51
<i>Penaeus notialis</i>	15.41	9.65	-	25.06
<i>Parapenaeopsis atlantica</i>	24.94	-	-	24.94
Total	44.86	38.47	16.67	100.0

Source: 2004 N/O Al-Awam demersal research cruise

2.2.1.2 Cephalopod

Cephalopods represent about 3% of the demersal biomass (according to the 2004 N/O Al-Awam demersal research cruise). Whilst the waters have an abundance of species (Table 14), the main commercial species represented are the common octopus (*Octopus vulgaris*), and the common cuttlefish (*Sepia officinalis*), both of which are caught in demersal trawl fisheries. While cuttlefish was the more dominant species during the 1995 research cruise, octopus has been found to be more abundant in 2004.

Table 14 : Squid and octopus species caught in demersal research cruise in 2004 of N/O AL AWAM

Scientific name	English vernacular name	Family
Squid / cuttlefish		
<i>Alloteuthis africana</i>	African squid	<i>Loliginidae</i>
<i>Illex coindetii</i>	Broadtail shortfin squid	<i>Ommastrephidae</i>
<i>Loligo forbesi</i>	Veined squid	<i>Ommastrephidae</i>
<i>Sepia bertheloti</i>	African cuttlefish	<i>Sepiidae</i>
<i>Sepia officinalis</i>	Common cuttlefish	<i>Sepiidae</i>
<i>Sepia orbignyana</i>	Pink cuttlefish	<i>Sepiidae</i>
<i>Sepia ornata</i>	Ornate cuttlefish	<i>Sepiidae</i>
<i>Toarodes sagittatus</i>	European flying squid	<i>Ommastrephidae</i>
<i>Todaropsis eblanae</i>	Lesser flying squid	<i>Ommastrephidae</i>
Octopus		
<i>Eledone spp.</i>	Horned & musk octopuses	<i>Octopodidae</i>
<i>Octopus vulgaris</i>	Common octopus	<i>Octopodidae</i>

2.2.1.3 Demersal fish

The information in this section was generated by demersal research cruises undertaken in 1995 and 2004 by the N/O N'Diogo and N/O Al-Awam respectively. The main demersal fish families of commercial importance, in order of decreasing abundance, are the breams (*Sparidae*), followed by the grunts and sweetlips (*Haemulidae*), the sea catfishes (*Ariidae*), and the croakers and drums (*Sciaenidae*). Hakes (*Merlucciidae*) and threadfins (*Polynemidae*) follow, but in greatly reduced numbers. The breams have replaced the grunts and sweetlips as the most abundant group, with respect to the findings, while all other groups have retained their rank. The six top families listed represent just over 75% of finfish biomass in Guinea Bissau waters. The remaining 25% are made up by the following families in decreasing order of abundance: *Gerreidae*, *Soleidae*, *Macrouridae*, *Cynoglossidae*, *Mullidae*, *Rachycentridae*, *Priacanthidae*, *Lophiidae*, *Serranidae*, *Zeidae*, *Gadidae* and *Labridae*. Overall, the demersal bony fish represent 68% of the demersal biomass. The cartilaginous fishes (rays and sharks) add another 11% and 10% respectively to the demersal biomass, giving a total of 89% for fish.

The following table indicates the most important species for the six most abundant families of Guinea Bissau demersal bony fish.

Table 15 : Most commonly found species in top six demersal bony fish families

Family	Scientific name	Vernacular name (GB)	FAO 3_A code
<i>Sparidae</i>	<i>Dentex angolensis</i>	Denton	DEA
	<i>Dentex congoensis</i>	Denton	DNC
	<i>Dentex maroccanus</i>	Denton	DEM
	<i>Dentex macrophthalmus</i>	Denton	DEL
	<i>Pagrus caeruleostictus</i>	Pargo de puntuz azul	BSC
	<i>Pagrus pagrus</i>	Pargo africano	RPG
<i>Haemulidae</i>	<i>Pomadasys jubelini</i>	Cor-cor de pingos	BUR
<i>Ariidae</i>	<i>Arius latiscutatus</i>	Bagre boca lisa	AUR
	<i>Arius parkii</i>	Bagre da Guiné	(?)
	<i>Arius heudeloti</i>	Bagre boca lisa	SMC
<i>Sciaenidae</i>	<i>Pseudolithus elongatus</i>	Djoto	PSE
	<i>Pseudolithus brachygnathus</i>	Oai	CKL
	<i>Pseudolithus typus</i>	Corvina tipo	PTY
	<i>Pseudolithus senegalensis</i>	Corvina de Senegal	PSS
	<i>Umbrina canariensis</i>	Corvina de Canárias	UCA
<i>Merlucciidae</i>	<i>Merluccius polli</i>	Merlussa de Angola	HKB
	<i>Merluccius senegalensis</i>	Merlussa de Senegal	HKM
<i>Polynemidae</i>	<i>Galeoides decadacylus</i>	Barbinho de dez barbas	GAL

2.2.1.4 Large Pelagic Fish, Sharks and Rays

The main oceanic fisheries of commercial importance in this region are for tunas, swordfish and shark.

The major species of tuna in Guinea Bissau waters are the yellowfin tuna (*Thunnus albacares*), which is the target of a dispersed fishery by the industrial purse seine fleet, and the bigeye tuna (*Thunnus obesus*) targeted by foreign fleets (pole and line and long-line); the skipjack (*Katsuwonus pelamis*) is a smaller tuna normally found in the tropics and caught by purse seiners. Tuna migrations seem to follow the annual northward motion of the upwelling 'hot spots' in a cyclic motion, moving up along the coast from 11°N to 33°N. Strong upwelling activity starts at the end of February in Guinea Bissau, and ends by early October on the Moroccan coast, at Casablanca. Tunas appear to migrate through the Guinea Bissau EEZ during the first and early second quarters of each year, where they are targeted by purse seine vessels of European origin.

The Atlantic swordfish (*Xiphias gladius*) is targeted by industrial surface long-line fishing vessels, along with several species of shark, (see following table). Other large pelagics listed in Fish Base⁸ are the Black marlin (*Makaira indica*), Atlantic blue marlin (*Makaira nigricans*), Atlantic white marlin (*Tetrapturus albidus*), and Swordfish (*Xiphias gladius*) but these are known to be exploited only to a very limited extent within the Guinea Bissau EEZ.

Guinea Bissau is also rich in shark resources. Table 16 below lists demersal sharks (and rays) recorded in the catch during the N/O Al Awam research cruise of 2004. Pelagic shark species abound in Guinea Bissau waters. Sharks are a prized resource, and pelagic sharks are subject to a targeted fishery carried out by mostly Senegalese fishermen deploying long-lines and gillnets. The most valued species is the Bignose shark (*Carcharinus altimus*), whose fins fetch the highest prices on Asian markets.

⁸ Froese, R. and D. Pauly. Editors. 2005. FishBase. World Wide Web electronic publication. www.fishbase.org, version (03/2005).

Table 16 : Demersal sharks (and rays)

Scientific name	English vernacular name	Familly
Sharks		
<i>Galeus melastomus</i>	Blackmouth catshark	<i>Scyliorhinidae</i>
<i>Galeus polli</i>	African sawtail catshark	<i>Scyliorhinidae</i>
<i>Heptranchias perlo</i>	Sharpnose sevengill shark	<i>Hexanchidae</i>
<i>Mustelus mustelus</i>	Smoth-hound	<i>Triakidae</i>
<i>Rhizoprionodon acutus</i>	Milk shark	<i>Carcharinidae</i>
<i>Scyliorhinus canicula</i>	Small-spotted catshark	<i>Scyliorhinidae</i>
<i>Scyliorhinus cervigon</i>	West African catshark	<i>Scyliorhinidae</i>
<i>Scyliorhinus stellaris</i>	Nursehound	<i>Scyliorhinidae</i>
<i>Squalus megalops</i>	Shortnose spurdog	<i>Squalidae</i>
<i>Squalus acanthias</i>	Picked dogfish	<i>Squalidae</i>
<i>Squalus blainvillei</i>	Longnose spurdog	<i>Squalidae</i>
<i>Squatina aculeata</i>	Sawback angelshark	<i>Squatinidae</i>
<i>Squatina oculata</i>	Smoothback angelshark	<i>Squatinidae</i>
Rays		
<i>Dasyatis centroura</i>	Roughtail stingray	<i>Dasyatidae</i>
<i>Dasyatis margarita</i>	Daisy stingray	<i>Dasyatidae</i>
<i>Gymnura micrura</i>	Smooth butterfly ray	<i>Gymnuridae</i>
<i>Raja barnardi</i>	Bigthorn skate	<i>Rajidae</i>
<i>Raja clavata</i>	Thornback ray	<i>Rajidae</i>
<i>Raja doutrei</i>	Violet skate	<i>Rajidae</i>
<i>Raja miraletus</i>	Brown ray	<i>Rajidae</i>
<i>Raja straeleni</i>	Spotted skate	<i>Rajidae</i>
<i>Rhinobatos cemiculus</i>	Blackchin guitarfish	<i>Rhinobatidae</i>
<i>Rhinobatos rhinobatos</i>	Common guitarfish	<i>Rhinobatidae</i>

A 1993 CIPA study revealed that Ornagozinho Island in the Bijagos group was the centre of the shark fishery, and the major caught species were reported as *Carcharinus signatus*, *Carcharinus limbatus* and *Rhinobatus rhinobatus*. Other pelagic *carcharinid* and *lamnid* sharks are known to roam Guinea Bissau waters, such as Thresher, Blue and Mako sharks, equally valued for their meat and fins and are targeted by surface long-line vessels (Table 17).

Table 17 : Main shark species caught in surface long-line

Spanish Common name	English Common name	Species
Pez martillo / Tubarão	Hammerhead sharks	<i>Sphyrna spp.</i>
Marrajo ¹	Mako Shark	<i>Isurus oxyrinchus</i> <i>Isurus paucus</i>
Quella	Blue Shark	<i>Prionace glauca</i>
Jaqueton	Silky shark Great white shark	<i>Carcharinus falciformis</i> <i>Carcharodon carcharias</i>

¹ May also be the Porbeagle shark, *Lamna nasus*

2.2.1.5 Small pelagic fishes

There are several important species of small pelagic fishes in Guinea Bissau waters. Most of the commercially important small pelagic species are from the *clupeid*, *carangid* and *scombrid* families. They migrate widely on long-shore routes, straddling the waters of a large number of West African countries, ranging from Morocco in the north, down to Liberia in the south. The species of main importance are *Decapterus rhonchus* (Carapau), *Scomber japonicus* (Cavala), *Sardinella* spp. and *Caranx senegallus* (Sareia). Bonga shad (*Ethmalosa fimbriata*) is very important representing a catch of about 14,000 tonnes a year, around 20% of total catch. The false scad (Carapau) and sardinellas represent some 80-90% of the overall recorded pelagic catch. It is thought that important stocks of juveniles of these species, as well as adult stages of anchovies, are associated with the shallow waters of the extensive Guinean shelf.

2.2.2 Fleets –Stakeholders

2.2.2.1 Overview of Industrial Fleet

Given the high productivity of its waters, and various fisheries access regimes in place, significant numbers of industrial fishing vessels are present in the Guinea Bissau EEZ. Distant water fishing is pursued outside the 12 mile limit reserved for artisanal fisheries. The nations and entities present in Guinea Bissau in 2005 include a Chinese fishing fleet operating under a bi-lateral fisheries agreement (signatory CONAPEMAC, the Marine Fisheries National Cooperation of the Peoples Republic of China), the EU fleet, operating under a bi-lateral fisheries agreement, the Italian owned FEDERPESCA fleet, operating under a bi-lateral fisheries agreement with African-flagged vessels, and a range of chartered and nationally flagged vessels, some of which are beneficially owned by Korean interest groups. Table 18 summarises vessel numbers and gross tonnage by gear type, effectively licensed in the industrial fisheries for 2003, 2004 and 2005. Note that data for 2005 are preliminary only.

Table 18 : Summary of licensed and effectively deployed GT per sector per year for all fleets combined

		2003	2004	2005*
Shrimp trawlers	vessels	71	78	58
	GT	13,709.5	10,983.1	6,825.9
Demersal fish trawlers	vessels	25	20	13
	GT	2,512.4	2,114.1	978.2
Cephalopod trawlers	vessels	38	28	16
	GT	4,611.5	4,514.3	2,558.8
Pelagic fish trawlers	vessels	6	5	5
	GT	8,451	9,490	4,745
Surface long-line	vessels	2	-	3
	GT	266.5	-	155.6
Tuna seiners	vessels	31	28	22
	GT	28,106.6	27,270.3	21,048.2
Tuna pole & line	vessels	12	14	11
	GT	2,209.4	2,734.6	1,717.6
TOTAL vessels		185	173	128
TOTAL GT		59,956.9	57,106.4	30,029.2

*preliminary data

The shrimp trawlers, and other demersal trawlers (fish and cephalopod), represent the most important group of fishing vessels present in Guinea Bissau. This group is followed by the tuna fishing fleet, which is almost entirely operated by EU vessels. All of the catch from this industrial fishery is frozen at sea. It may be transhipped to reefer transport at sea. Tuna from the EU fleet may be landed at Dakar, and demersal trawlers may also land their catch at the Canary Islands. Only relatively small quantities of fish from the industrial fleet are landed into Bissau, consisting of by-catch (so-called "Africa mix" of relatively low value demersal fishes). This enters the local trade, and may even be processed by smoke-drying for onward trade.

The EU agreement is described in more detail in Section 3.2. In 2005, Guinea Bissau also has fisheries agreements in place with CONAPEMAC (China), and FEDERPESCA (an Italian interest Group). The main features of these agreements are summarised in Table 19 below, with a brief summary of the EU-Guinea Bissau Agreement for comparison. An Agreement with South Korean Interest group Kim Anavipesca in 2000 was not renewed in 2001, and the remaining vessels now operate under private charter arrangements. It should be noted that a number of other Agreements have also lapsed, or, if still in force, have ceased to be operational. More details of the fleet segments of the industrial fisheries and their operating conditions are provided in the following sections.

Table 19 : Comparative analysis of fishing opportunities and related costs under currently existing agreements

		EU	CONAPEMAC	FEDERPESCA
		16/06/01 - 15/06/06	01/01/02 - 31/12/05	01/10/04 - 30/09/06
Quotas	Duration	5 years	4 years	2 years
	Shrimp	4400/GT/yr*	2790/GT/yr	2986/GT/yr
	Cephalopods	4400/GT/yr*	1990/GT/yr	371/GT/yr
	Demersal fish		398/GT/yr	
	Pelagic fish			
	Tuna seiners	40 vessels		
	Tuna pole & line and long-line	30 vessels†		
Tariffs	Shrimp	€279/GT/yr	US\$400/GT/yr	€325/GT/yr
	Cephalopods	€219/GT/yr	US\$325/GT/yr	€275/GT/yr
	Demersal fish	€197/GT/yr	US\$300/GT/yr	
	Pelagic fish			
	Tuna	€25/ton		
	FGRH	€10/GT/yr	US\$8,000/vessel/yr	€4,8000/vessel/yr
	Financial compensation	€7,260,000/yr		
	Non-landing tax	€23/GT/yr		
Mandatory landings			30tons/vessel/yr	200tons/2yrs
Other advantages		€3,000,000 in institutional support, targeted actions and ad hoc decision		Provision of three fishing vessels and technical assistance to operate them
Total income (projection)		€12,983,743	€1,966,887	€1,175,547

* originally, 9,600GT/yr and 2,800GT/yr were foreseen in the shrimp and cephalopod sectors respectively. The EU decided to reduce the tonnage due to severely reduced shrimp biomass (as of 16th June, 2004)

† originally 36 vessels were provided for (also changed on 16th June, 2004).

2.2.2.2 CONAPEMAC Chinese trawl segment

The People's Republic of China's fisheries with Guinea Bissau agreement (via CONAPEMAC, the Marine Fisheries National Cooperation) was signed in 1997. Fishing opportunities for shrimp and cephalopods are conceded.

The CONAPEMAC agreement specifies the company to undertake a range of investments on a reimbursable basis; China reportedly already agreed to construct a new building of the Centre for Applied Fishery Research, at an estimated cost of US\$3.5 million. The fisheries agreement essentially provides

fishing licences to the Chinese fleet at 'half price' enabling the Chinese Government to apply the 'discount' to the repayment of outstanding loans to the Guinea Bissau government (reportedly about US\$3.8 million). Under pressure from the EU, the Chinese and Italian agreements were recently renegotiated to bring access fees more in line with those of other agreements.

Vessels are currently limited to shrimp and cephalopod trawlers, but access for fish trawlers is also foreseen under the agreement. The 2002-2005 Protocol provides for the fishing opportunities listed in Table 20. The 2005 renegotiation applied a reduction on the shrimp trawl fleet of about 28% of number of vessels and GRT, but the effort was re-applied to the fish and cephalopod sectors.

Table 20 : Fishing opportunities under the 2002-2005 Protocol between the PRC and Guinea Bissau

	2002-2005 Protocol		2005 renegotiation	
	Number of vessels	Total GRT / year	Number of vessels	Total GRT / year
Demersal fish trawlers	2	398	4	3188
Demersal cephalopod trawlers	10	1,990	12	
Demersal shrimp trawlers	14	2,790	10	1,990
TOTAL	26	5,178	26	5,178

Source: 2002 Protocol and 2005 Renegotiation

China is currently (2005) exploiting 95.7% of its fisheries agreement opportunities in the shrimp and cephalopod sectors, while the demersal fish opportunities seem to be of no interest. An analysis of Chinese catches reveals that very little shrimp is caught by these vessels (historically less than 5%), and vessels appear to effectively target fish, using shrimp and cephalopod trawls, both of which have smaller mesh sizes (40mm & 50mm stretched mesh opening respectively, instead of 60mm for fish). The practice of targeting fish with these nets is in violation of the Agreement, which provides for a maximum by-catch of 9% of fish and crustaceans for cephalopod vessels. There is no by-catch limit stipulated for shrimp trawlers. To date, no fines have been issued and no licences refused to address and rectify this situation. This practice is of course highly detrimental to demersal fish stocks, as vast amounts of juveniles fall prey to these operations. The impact of the Chinese fleet on shrimp resources is likely to be limited, for lack of targeted fishing for that particular resource. This suggests that the re-deployment of fishing effort away from shrimp is a paper exercise only, and that there was little impact on fishing effort as a result of the renegotiation of the Agreement. The impact on the fish stocks and by-catch is likely to be quite significant.

The Chinese fishing fleet, in contrast to the Korean fleet, is very stable, and its evolution over the past 5 years is shown in Table 18. It can be seen that the same number of vessels and tonnages have been in place for many years. An estimated 95% of the licences are emitted on a 12-month basis. This means that total GT in Table 18 can be considered as a representative effort unit for each year.

Table 21 : Licensed vessels of the PRC in the Guinea Bissau industrial fisheries sector

		2000	2001	2002	2003	2004	2005*
Shrimpers	vessels	13	12	14	14	14	14
	GT	2,433	2,237	2,632	2,632	2,632	2,632
Demersal trawlers	vessels		2				
	GT		398				
Cephalopod trawlers	vessels	9	11	13	10	10	10
	GT	1,688	2,300	2,539	1,942	1,942	1,942
TOTAL vessels		22	25	27	24	24	24
TOTAL GT		4,121	4,971	5,171	4,574	4,574	4,574

* first semester

2.2.2.3 FEDERPESCA trawl segment

Since 2001, the Italian fishery federation FEDERPESCA has operated in Guinea Bissau on the basis of a separate fisheries agreement. The National Federation of the Fishery Enterprises (FEDERPESCA), was founded in 1968 and since then associated with CONFINDUSTRIA (the board of Italian Industries). FEDERPESCA represents and protects the interests of the ship-owners and of the enterprises of the Italian fishery industry toward public administrations, the Parliament and the European Union. FEDERPESCA is closely associated to FEDER.OP.IT, the Association of the Italian Organizations of Fishery Producers. Approximately 21000 fishery enterprises are associated with FEDERPESCA, including activities in fishing, processing, trade, input supplies and services. FEDERPESCA is located in Rome, publishes La Pesca Italiana, and maintains a website at www.federpesca.it.

The FEDERPESCA agreement has provided fishing opportunities for both Italian flagged vessels and decommissioned EU vessels that were permanently exported and transferred to Joint Ventures, operating under the flags of various African nations. In all cases of re-flagging, the majority beneficial ownership of the vessels has remained in the hands of Italian corporate members of FEDERPESCA.

The current agreement between FEDERPESCA and the Government of Guinea Bissau was signed on 16th September 2004. It is noted that this was after the signature of the amendment of the 9th Protocol under the EU-Guinea Bissau Fisheries Protocol. The target resources stipulated under this agreement are shrimp, fish and cephalopods. There is no limit set to the capacity or number of vessels. However, there was an apparent 10.3% reduction in nominal fishing effort (indicated by licences issued). The Government of Guinea Bissau receives licence fees and will receive three trawl vessels as compensation during 2005. A condition of the licence is that the Italian vessel owner forms a local company for the operation of the vessel.

FEDERPESCA exclusively operates shrimp trawlers, and does not utilise its fish/cephalopod opportunities, though it is likely that cephalopods form a significant part of the catch value. The vessels operated by Sigmar Lda (the FEDERPESCA agent in Bissau) are stipulated not to be EU-flagged, with an LOA of 20 to 40 meters. Most of the vessels of Italian origin are now flagged in Senegal. Two are flagged in Angola. The last vessel of the FEDERPESCA fleet to fly an Italian flag, *Maria Asaro*, changed over to the Senegalese register during 2004. It is clear from Table 22 that the fishing activities under this agreement have fallen significantly since 2003. FEDERPESCA reports reduced yields and profitability as the reason.

Table 22 : Licensed vessels and utilisation of licences of FEDERPESCA

	2001	2002	2003	2004	2005*
Number of vessels	8	9	17	10	10
GT available	2,679	3,194.4	6,191	3,238.6	2,944.7
Uptake	2,427.9	2,602.2	4,510.4	2,339.5	991.5

*preliminary data

2.2.2.4 Korean fleet segment

A fisheries agreement between the Korean Bissau-based company Kim Anavipesca and Guinea Bissau was signed in 2000, but was not renewed the following year. This agreement foresaw the fishing opportunities listed in Table 23. It resulted in vessels operated by the Kim Anavipesca group operating seven Chinese-flagged vessels, of which 5 were fish trawlers and 2 shrimp trawlers (total: 1,250GT for fish trawlers, and 500GT for shrimp trawlers)⁹. The only Korean-flagged trawl vessels officially left in Guinea Bissau's fishery in 2003 were vessels chartered by national companies (owned by foreign capital).

Table 23 : Fishing opportunities under the 2000 Protocol between the Korean company Kim Anavipesca, and Guinea Bissau

	Number of vessels	Total GT / year
Dem. fish trawlers 350-400GT	4	1,400-1,600
Dem. fish trawlers 250-350GT	6	1,500-2,100
Dem. shrimp & cephalopod trawlers 250-350GT	10	2,500-3,500
Crustacean trawlers 250-350GT	2	500-700
TOTAL	26	5,900-7,900

Korean-flagged demersal fish trawlers have a tendency to move in and out of the fishery between years, and generally only buy licences to operate for a limited number of months. Only two out of fourteen vessels have consistently operated in Guinea Bissau between 2002 and 2005. It is believed that in years when no licences are bought, the same vessels continue to operate elsewhere in the sub-region. The same is true for the intra-annual periods not covered by licences. However, it seems that especially in years where no licences are emitted, chances of these vessels operating illegally in Guinea Bissau's EEZ are high, one reason being that these vessels target essentially non-migratory resources. This underlines the necessity for an effective sub-regional MCS structure, and the putting in place of a sub-regional fishing licences record, allowing better targeting of problem vessels.

In addition, six Korean-flagged vessels are known to be operating in the Guinea Bissau fishery in 2005, following a year of no presence. In the first three months of 2005, Orango Fisheries Lda had 40 motorised 15HP "Korean" canoes licensed by PESCARTE (the Department of Artisanal Fisheries of the Ministry of Fisheries), in order to fish within the 12 mile zone. It is probable that these vessels operate in conjunction with a *ramasseur* vessel, which may land in Senegal. For a combined total annual licence fee of 16,770

⁹ The KIM ANAVIPESCA agreement was established between the South Korean Government and the Government of the Republic of Guinea Bissau in 09.05.2000 for a period of one year. It is thought to have expired at the time of writing

euros¹⁰ for the canoes, this particular venture alone is likely to generate a catch of an estimated 1,728 tons of high value bottom fish – for an estimated value of 17.28 million euros.¹¹ The State recovers one tenth of a per cent of the resource value, while the catches are unlikely to be landed, monitored or otherwise recorded and included within the overall catch monitoring and fisheries management framework.

2.2.2.5 Charter and national segment

A number of foreign owned vessels operate under chartering agreements with locally based companies. In May 2005, the chartered fleet was made up of 28 vessels, flying a range of flags, including flags of convenience from Panama, Belize, Gabon, Honduras, Guinea and Gambia. About 25% of these vessels fly a Korean flag.

These vessels are of diverse origin, and include five old, and large, Russian pelagic trawlers now flying Belize and Panamanian flags. These vessels target small pelagic resources – the only pelagic trawlers in the fishery. In 2004, the remaining 29 vessels were licensed for a mixture of demersal trawls, of which the demersal fish trawling sector was predominant. Table 24 shows the evolution of this national charter fleet over the last five years, indicating a significant reduction in the tonnage applied.

Table 24 : Licensed vessels in the Guinea Bissau industrial fisheries sector

		2000	2001	2002	2003	2004	2005*
Shrimpers	vessels	14(12/2)	4	3	14(3/11)	9	3
	GT	3,683.3	784.3	543.2	2,047.1	1,971	544.9
Demersal trawlers	vessels	34(29/5)	3 [§]	18(16/1/1)	22	19	13
	GT	8,118.3	5,694	6,006.2	5,287.1	5,399.5	3,973.5
Pelagic trawlers	vessels	10	5 [§]	6	6	5	5
	GT	22,267	9,624.2	11,388	11,388	9,490	9,490
Cephalopod trawlers	vessels	13(4/9)		4	4(3/1)	1	2
	GT	3592.3		1,337.9	1,206.9	200	472.4
Surface long-line	vessels	1		3			3
	GT	134.2		200.75			622.3
Crab vessel	vessels		1				
	GT		134.2				
TOTAL vessels		72	11	34	46	34	26
TOTAL GT		37,795.1	16,236.7	19,426.1	19,929.1	17,060.5	15,103

*preliminary data

[§] 2 vessels the same over two different periods

¹⁰ 275,000CFA per canoe

¹¹ Estimate based on the following assumptions: 6 hook and line fishermen per canoe, catching 2 kg of fish per hour per 10 hour day. 360 days fishing per year. 40 canoes. FOB price for fish: 10euros/kg

2.2.2.6 *Bilateral agreement with Senegal*

A bilateral agreement signed on December 22, 1978, aimed to establish the regime for fisheries exploitation and management in a shared zone. The Protocol to the agreement was not signed until November, 1995. After the war in 1998, a revised protocol was rejected by Guinea Bissau. The Protocol was written to facilitate joint collaboration on research and to form a shared fisheries zone to be exploited by both nations, with revenues shared on a 50-50 basis. The agreement on the shared zone was signed in 2002, but no protocol has been signed concerning Senegalese fishing in the Guinea Bissau EEZ. The protocol was reviewed by the consultants. The main elements are:

- there is a transitional period of 12 months following signature of the protocol agreement, during which the agency can devolve specific managerial tasks to either State party;
- vessels (including vessels operating under foreign fishing agreements) are allowed to fish anywhere in the zone providing that they have a valid licence emitted by either State party;
- State parties should provide all information to the Agency on a trimestral basis (catch data, licensing data, etc.);
- The Agency is entitled to recover 5% of all fees charged for fishing licences by either State party, on a trimestral basis;
- fishing activity inside the grey zone will be carried out in conformity with the fisheries law in force in Guinea Bissau;
- the protocol is to be renewed every 12 months

The Agreement may be regarded as non-operational. A Senegalese fleet of 10-15 *ramasseur* vessels and 500-750 pirogues operates constantly in Guinea Bissau waters. However, these activities are not covered by this Agreement.

2.2.2.7 *Pirate fleet segment*

IUU fishing incidence in the sub-region covered by the CSRP (Commission Sous-régionale des Pêches/Sub-Regional Fisheries Commission) is known to be very high, with the highest incidence in the three southern countries (Sierra Leone, Guinea and Guinea Bissau). Pirate vessels take advantage of the weaknesses in fisheries MCS, civil conflicts and the incapacity of many governments to maintain an effective, deterrent fisheries surveillance presence at sea.

An overwhelming body of anecdotal evidence and solid regional surveillance data points to the fact that vessels, especially those owned by South Korean interest groups, are involved in un-licensed IUU operations carried out in Guinea Bissau waters. The impact of these fleets on fisheries resources is both important, and unrecorded, which poses a serious problem for fisheries management and resource conservation efforts.

2.2.2.8 *Artisanal fleet segment*

Artisanal fisheries in Guinea Bissau are concentrated in the rivers and estuaries along the coast, particularly in the Bijagós Archipelago and the Cacheu River.

Assessing the size of the artisanal fleet in Guinea Bissau is difficult due to the lack of data. Several reports have investigated the artisanal fleet, and estimates fluctuate widely. One specific problem is due to the fact that many participants are foreign and operate without licences. In addition, the complexity of Guinea Bissau's coastal outline and outlying and remote archipelago, means that the situation is unlikely to become any more transparent in the near future.

In the early 1990s, there were an estimated 8,200 fishermen, including fishermen from neighbouring countries, Senegal and Guinea in particular¹². A DIPA national framework survey of 1997 produced the

¹² DGfPA 1994

following set of figures for artisanal fisheries; 9,800 fishermen, divided into 33 different ethnic groups and 9 nationalities, representing a 27% increase from 1991 census data. There were 4,975 boat owners, and 2,490 canoes were recorded. Of these, 623 canoes were motorised (25.1%). 65% of recorded fish processors were foreigners.

CIPA also carried out two framework surveys in 2003 and 2004, but data from these surveys are not reliable for nominal figures on estimates of fishermen and canoes. However, given figures for total number of fishermen and canoes in 2004 are the following: 7,142 fishermen, and 1,498 canoes, providing evidence that large numbers of entrants are present. Staff in PESCARTE, a Directorate of the Ministry of Fisheries responsible for small scale fisheries, has started to digitalise information from issued licences in 2004; however there is no available information pre-dating this year. By 30th March, 2005, 195 licences had been emitted in the artisanal sector. However, licences are thought to represent only a small fraction of the operators present. PESCARTE consider that some 5,000 canoes or more are currently operating in Guinea Bissau waters at any given point in time.

The fleet can be broadly divided into a foreign and a national sector. The national canoes are often non-motorised, and activity is largely for subsistence purposes. It is thought that less than 10% of the entire fleet is national. The remaining entrants of foreign origin have been present for decades. Civil strife in Sierra Leone and Guinea over the last decade have contributed to an increased influx of fishermen refugees into the Bolama-Bijagós archipelago, and other coastal areas, especially in the Cacine area. Many Senegalese fishers are also known to operate, with migrant communities periodically established in several regions. The number of active foreign fishermen appears to have decreased during the 1998-1999 Civil War, but current levels are probably back up to 8,000 to 10,000 fishermen.

In addition, up to 15 *ramasseurs* are reportedly operating in Guinea Bissau waters (down from about 23 vessels in 2000)¹³. These are vessels of some 250 GRT with on-board fish preservation and processing capacity, which recruit (mainly Senegalese) artisanal fishermen and travel to foreign fishing grounds, each with 40-49 pirogues either carried onboard or towed.

Artisanal fishing operations target Djafal (*Ethmalosa fimbriata*), high value demersal fish, barracuda, sharks and mullet. The gears deployed include drift and bottom set-nets, hook and line, long-lines and small seines. Most of the domestic fishing takes place in waters that are inaccessible to industrial vessels, but this does not appear to be the case for foreign artisanal fisheries. In contrast to domestic fishermen, Senegalese and Guinean artisanal fishermen are known to be efficient, most likely accounting for a substantial proportion of total artisanal catches in Guinea Bissau.

2.2.3 Catch estimates

2.2.3.1 Industrial fisheries

Reported industrial fish catches in Guinea Bissau are shown in Table 25. This shows a significant decrease from about 115 to 31 thousand tonnes over the period 1990 to 2001. However, the high catches in the early part of this period were the result of ex-Soviet vessels fishing for small pelagic fish such as Horse mackerel, Scads and Sardinella, and this area of fishing was substantially abandoned in 1992. Some estimates indicate that catches were as high as 200 thousand tonnes in this period¹⁴.

When small pelagic fish are removed from the catch statistics, a better picture of the status of demersal catches emerges. There continues to be a decreasing trend in total demersal catches (21,000 t in 2000 and 19,000 t in 2001¹⁵). Declines in the crustacean and cephalopod catches are also noted in these two years.

¹³ FAO/WB 2003

¹⁴ Sea Around Us Project (www.seaaroundus.org)

¹⁵ Although CIPA has indicated that data for 2002 and 2003 is available the consultants have been unable to obtain catch data for later than 2001

Table 25 : Catch estimates from the industrial fisheries based on observer data.

Year	Fish	Crustacean	Cephalopod	Total
	tonnes			
2001	25,262	3,379	2,306	30,947
2000	30,996	2,393	2,630	36,018
1999	<i>No data</i>			
1998				
1997	26,455	2,314	4,920	33,689
1996	24,535	3,099	4,488	32,123
1995	25,952	2,944	7,773	36,670
1994	24,199	2,745	6,478	33,422
1993	29,737	4,436	6,414	40,588
1992	34,219	3,302	5,034	42,555
1991	77,607	4,403	10,154	92,163
1990	97,608	5,134	13,115	115,857

Source: CIPA

Table 26 shows the estimated catch rates by fleet segment. There are significant differences apparent between fleets in terms of fishing strategy, of which the daily catch rate is a good indicator. High catch rates obtained by Bulgarian, Panamanian and Russian chartered vessels are the result of fishing for the more abundant small pelagic resources. Intermediate catch rates of around a 100 kg per fishing hour are obtained by trawlers in the industrial fleet. EU and FEDERPESCA vessels show consistently lower catch rates as a result of specific targeting of shrimp and to, a lesser extent cephalopods, rather than fish.

Table 26 : Catch by flag of vessel fishing in Guinea Bissau, 2000 & 2001

	Catch (t) 2000				CPUE	Catch (t) 2001				CPUE
Country	Cephalopods	Crustaceans	Fish	Total	Kg/ Fishing hour	Cephalopods	Crustaceans	Fish	Total	Kg/ Fishing hour
Bulgaria			1,665	1,665	921		107	2,048	2,154	2,532
Cameroon	2	27	879	908	88					
China	1,709	189	6,728	8,627	99	1,346	387	8,974	10,707	98
Gabon		119	1	120	44		138	2	140	37
Guinea Bissau	0	640	1,540	2,180	72	6	1,181	1,649	2,835	67
Honduras	18		400	418	103					
Italy	348	120	546	1,014	48	469	250	789	1,508	48
Korea			992	992	234	2	26	607	635	212
Mauritania		9	0	9	26					
Panama	125		10,895	11,020	885	4		10,061	10,064	2,697
Portugal	44	345	104	493	33	82	373	106	561	30
Russia			4,644	4,644	1,265					
Senegal	69	62	968	1,098	100	354	143	599	1,096	54
Spain	315	769	1,605	2,689	59	44	719	420	1,183	35
Grand Total	2,630	2,271	30,968	35,869	144	2,306	3,332	25,255	30,893	115

Source: CIPA

Above data includes chartered vessels. Based on CIPA observer data.

The data from the CIPA observer programme (2000-2001) appears to be reasonably consistent in terms of catch and effort as well as species composition. Coverage appears to be low for some of the fleets, when considering the number of licensed vessels and the average number of fishing days per vessel. Licences are issued for 3, 6 or 12-month periods, but information on whether the vessel is actively operating during the licensed period is not available.

Direct comparison of different data sources was possible only for the Portuguese vessels, where data from Directorate of Fisheries in Portugal was also available. This comparison showed that catches based on CIPA observer data were, for the same period, 25% lower than Portuguese data taken from the official catch declarations (obtained via the Direcção Geral das Pescas e Acuicultura, Lisbon). However, further comparison with catch rates and yields revealed by interviews with stakeholders suggests that CIPA observers only record some 40% of the actual catch. It appears that non-declaration and under-declaration are standard practices in most fleet segments. In the absence of valid and reliable catch data for the EU trawl segment, this factor was therefore subsequently applied to the reported CIPA catch data for these segments, for the purpose of subsequent detailed analysis of the impacts of EU fishing activities reported in Section 3.2.4.

Assuming that an average vessel is operating about 180 days per year, trawling 17 hours per day, and catching an average of 130 kg per hour, total catches from the demersal trawl segment in recent years may be in the range of 40-60 thousand tonnes (2000 -2004). Note however that this includes both demersal and pelagic resources. This estimate is consistent with the CIPA observer data, accounting for incomplete coverage. It is also consistent with a total industrial catch estimate of the order 45-75 thousand tonnes that includes illegal fishing made by the World Bank and FAO in 2002¹⁶.

2.2.3.2 Artisanal fisheries

CIPA estimates that the catches in artisanal fisheries are in the range of 30 to 50,000 tonnes. One author¹⁷ estimated artisanal catches at 26,000 tonnes.

2.2.3.3 Offshore fisheries for large pelagic fish

As far as can be ascertained, only EU vessels fish for tuna within the Guinea Bissau EEZ. The declared catches of EU vessels fishing for tuna and tuna-like species in Guinea Bissau waters have been in the range from 767 tonnes in 2001 to 428 tonnes in 2004. These catches (see Table 27) correspond to about 0.2% of the total declared tuna catches in the Atlantic, which show their relatively minor importance.

¹⁶ FAO/WB 2003

¹⁷ Failler 2005

Table 27: Declared catches of the pole and line and purse seine vessels of the EU fleet fishing in Guinea Bissau.

	2001		2002		2003		2004	
Species	Spain	France	Spain	France	Spain	France	Spain	France
Bigeye	33		78	29	4		12	2
Skipjack	205		42	213	445		265	60
Albacore				278	12			
Yellowfin	13				202		21	25
Bluefin					10			
Swordfish	3							
Blue sharks	0.2							
Mako shark	0.1				34			
Various	10	503			9	27	44	
Total Tuna	264	503	120	520	716	27	342	87
EU Total	767		640		743		428	

However the catch of sharks in the Guinea Bissau is likely to much higher than reported in Table 27, since a number of shark species are known to be targeted by the small scale fisheries. There are no data on catches of this group of fishes.

2.2.4 Status of Fish Stocks

2.2.4.1 Demersal fish biomass

A key measure of the status of demersal fish stocks is provided by the historical time series of demersal survey data in Table 29 and Figure 4, which show a significant decrease in biomass (by a factor of between 3 and 6 times) over the period 1963 to 2004. The biomass estimates given are uncertain, depending on numerous factors including changing survey methodology, but there is clear evidence of a strong relative decrease in biomass, most of which appears to have occurred in the 1980s. Similar or even stronger decreases in biomass have been documented for the region¹⁸.

It is notable that the decrease appears stronger for non-commercial species, which could be an effect of high discard rates. It is also interesting to note that biomass appears to have stabilised at a much lower level over the last decade (1991, 1992 and 2004 surveys). The exception to this pattern is the 1995 survey, but this survey covered only the northern shrimp fishing grounds that are heavily exploited.

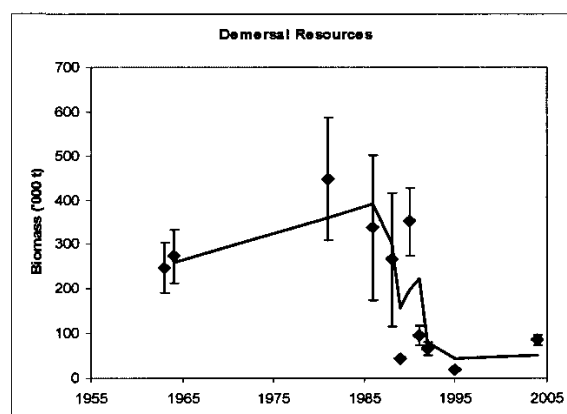
¹⁸ Chavance et al. 2005

Table 28 : Total demersal biomass estimated from research surveys.

Year	Research Vessel	No. of Hauls	Biomass ('000 t)		
			Total	Com	Non Commercial
1963	La Rafale	21	247	88	160
1964	La Rafale	18	273	129	152
1981	Nansen	17	448	91	396
1986	Nansen	29	337	37	303
1988	Noruega	31	266	33	234
1989	Noruega	83	45	25	20
1990	Noruega	98	351	128	224
1991	Noruega	30	95	44	51
1992	Nansen	43	66	23	44
1995	Capricórnio	77	20	12	8
2004	Al-Awam	99	85	56	29

Source: CIPA and SIAP project

Figure 4 : Changes in biomass of Guinea Bissau demersal resources, 1963 to 2004



Note that standardised catch rates were extrapolated to cover an area of 8000 nm² (70 % of the continental shelf) considered accessible to the industrial fisheries, using the swept area method. Error bars in the right-hand figure indicate standard error of the mean and the trend is given as a 2-point moving average.

These biomass estimates were used to estimate fishing mortality for commercial species groups, as an indicator of the level of exploitation. A special emphasis was placed on shrimp. The methodology and the results of this process are described in Annex 5. The results were used by the consultants as the basis for the fisheries management recommendations in Section 2.2.5, in the absence of valid and reliable scientific basis for the fisheries Management Plan of the Ministry of Fisheries (described in Section 2.2.5.1).

In summary, the exercise suggests that shrimp resources are subject to non-sustainable levels of exploitation. A high mortality of species such as Catfish, Flatfish, Meagre and Threadfins is consistent with the fact that these species share the same habitat as shrimp and that they are important by-catch of the

industrial shrimp fishery. Cuttlefish fishing mortality appears high, but as these are fast-growing species with short life cycles, the level of exploitation is thought to be sustainable¹⁹. This also appears to be the case for Octopus and Squid. Data on Hake fishing mortality are considered to be unreliable, as Hake is more of a deep-water resource, but is also associated with cephalopod catches. These deeper waters were not included in the biomass calculations, as they are not well sampled. Shark and Ray fishing mortality appear low, but this is linked with low catch estimates in the base data used. As these species cannot bear high fishing mortality (large and slow-growing species), it is essential to obtain good discard data on a species-by-species basis in order to make a proper assessment. Note also that fishing mortality in non-commercial species is high, based on assumed discard rates (probably conservative estimates). This is consistent with the observation that biomass of non-commercial species appear to have decreased more strongly than commercial species, as a result of high discard rates. If this is the case, species groups such as Sharks and Rays will suffer most from such levels of exploitation.

In the 1981 and 1988 trawl surveys, extremely high catches of *Balistes* species were recorded. According to Cavarivière (2002)²⁰, the explanation for this phenomenon appears to have been related to a combination of effects, including hydrographic conditions, their reproductive strategy and weak predation on the juveniles and adults of this species, possibly associated with impacts of trawl fisheries.

2.2.5 Fisheries Management Recommendations

2.2.5.1 Guinea Bissau Management Recommendations for demersal fisheries

To date, three management plans have been adopted for 1996, 2004 and 2005. The only complete FMP that ever existed was developed under the USAID funded TIPS project, in 1995 and 1996. This led to an annual FMP, which was in place for 1996. The FMP stipulated total allowable catches, total number of vessels, and total weight of GRT to operate in the various sectors. The following Table summarises the corner figures of the plan.

Table 29 : Fishing opportunities and TACs provided for in the 1996 FMP

Species Group	TAC (tons)	Fishing Effort	
		No. vessels	Total GRT
Shrimp	3,400	40	10,200
Demersal fish	40,000	25	6,253
Cephalopods	5,500	11	2,776
Pelagic fish	50,000	20	6,000 (?)
Tuna		52	30,000
Total	98,900 (excl. tuna)	148	55,229

The government has realised the importance of a FMP, and has recently undertaken the first steps in the direction of establishing a management framework for fisheries. In 2005, the Ministry of Fisheries

¹⁹ CEEAF 1997a

²⁰ Cavarivière A. (2002). Emergence de trois espèces des communautés démersales de l'Afrique de l'Ouest: points communs et différences. Symposium Proceedings "Marine fisheries, ecosystems and societies in West Africa: half a century of change". ACP-EU Fisheries Dakar, Senegal, 24 to 28 June 2002.

established a similar table to the one underlying the 1996 FMP, aiming at establishing maxima to the amount of fishing effort that can be applied to a particular sector. The fisheries management plan (Plano Gestão das Pescas) adopted for 2005 is only a brief 4-page document. It underlines that despite the internal efforts made by the Government on control and surveillance, IUU persist in the EEZ of Guinea Bissau. It establishes the total allowable catches and fishing efforts for the various sectors for 2005, defines the main management objectives, fishing zones, prohibited species and fishing gear in protected areas as well as additional management measures. However, due to lack of scientific data, no biological resting periods have been set in any of the plans adopted. Table 30 lists the limits and opportunities which guided the 2005 concession of fishing opportunities in the Guinea Bissau industrial fisheries sector.

Table 30 : Fishing opportunities and TACs provided by the Ministry of Fisheries for 2005

Species Group	TAC (tons)	Fishing Effort	
		No. vessels	Total GRT
Shrimp	3,000	39	11,000
Demersal fish	70,000	56	12,000
Cephalopods	5,000	25	8,000
Pelagic fish	80,000	11	20,000
Tuna	5,000	85	49,000
Total	163,000	216	100,000

There are several striking anomalies with respect to Table 30.

The setting of TACs appears to be pointless in the present context, as Guinea Bissau has no means of monitoring total catches. In any case, the crustacean TAC of 3,000 tonnes appears to have no biological basis, and does not indicate specific stocks.

The figures lack a direct relationship to resource evolution over the past 9 years. Although TACs have been reduced in the shrimp sector, the overall effort which may be applied in 2005 is little changes from the 2004 effort (220 GT less). Significant increases are also indicated in TACs for demersal fish and pelagic fish, which do not appear justifiable. The Al-Awam Survey (2004) Report 21 was used as the basis for the setting of demersal TACs in 2005. In the Al-Awam report, biomass estimates were arbitrarily doubled, assuming that the trawl caught only half of the exploitable biomass, leading to generous estimates of potential yield. This approach may be reasonable for shrimp, as the gear was inappropriate, but not for demersal fish, since the assumption leads to an excessively optimistic estimate of sustainable yield. The TACs and effort limits for the 2005 fishing year cannot therefore be considered to have any sound scientific basis whatsoever and the consultants recommend that it should not be used as the basis for sustainable resource management. The approach also underlines a lack of cooperation between the research arm and the DG Fisheries responsible for developing the FMP.

Below, the consultants propose an alternative approach, that uses the same data, but without doubling. Instead, we assume that the ratio between caught and available biomass is more or less the same for both survey and industrial fishing vessels

Few other management mechanisms have ever been put in place, or are currently being considered. There are mesh size limits for trawlers (although there is no apparent scientific basis for the criteria applied). In articles 26 and 27 of the fisheries law of 2000, the use of lights, explosives and poisons is proscribed for the purposes of catching fish. Protected species, whose catch and commercialisation are prohibited,

²¹ Diop et al. 2004

include all species of marine mammals, marine birds and marine turtles. There are no closed seasons which would allow species to safely reproduce in particularly sensitive areas.

However the development of Marine Protected Areas is significant, with several areas now in place, introduced by IBAP, with the support of FIBA, IUCN and the World Bank Biodiversity project,

2.2.5.2 Consultant's recommendations For Demersal Fisheries

Considering the previous sections, management measures are necessary to build up apparently overexploited stocks of shallow-water shrimp as well as deep-water shrimp (albeit to a lesser extent). However, fishing pressure appears to be excessive in the case of shrimp, where stakeholders comment on the fact that this fishery is close to being economically non-viable. Also, biomass decrease has been so strong (by an estimated factor of about 6) that precautionary measures are needed to safeguard against general degradation of the ecosystem.

In order to prepare possible scenarios for a reduction of effort, the data from the Licensing Office²² were used, providing vessel characteristics and licence information. However, many inconsistencies were found in relation to the expression of capacity (GT and GRT). As far as possible the data were corrected. The overall results had some small effect on total GRT employed by type of licence. The corrected fishing effort applied to the fishery during recent years is shown in Table 31 which should be compared with Tables in the section on fisheries management plan.

²² DGP, Guinea Bissau

Table 31 : Vessel characteristics and activity industrial fishing in Guinea Bissau.

Licence type	Data	2004	2003	2002	2001	2000
Cephalopod Trawl	Total GRT (adj)	4,514	5,077	4,220	1,928	3,542
	Avg Vessel GRT	268	263	255	195	251
	N Vessels	28	32	26	13	26
	N Vessels (adj)	18	20	17	10	15
	Avg N License Months	8	7	8	9	7
Fish Trawl Demersal	Total GRT (adj)	2,179	2,690	2,377	583	3,475
	Avg Vessel GRT	278	253	270	303	234
	N Vessels	20	27	22	5	34
	N Vessels (adj)	8	11	9	2	15
	Avg N License Months	5	5	5	5	5
Fish Trawl Pelagic	Total GRT (adj)	9,490	8,541	6,643	5,694	10,768
	Avg Vessel GRT	1,898	1,898	1,898	1,898	2,197
	N Vessels	5	6	6	5	11
	N Vessels (adj)	5	5	4	3	5
	Avg N License Months	12	9	7	8	5
Shrimp Trawl	Total GRT (adj)	10,880	14,052	9,935	10,949	11,153
	Avg Vessel GRT	210	252	197	217	232
	N Vessels	77	91	65	67	75
	N Vessels (adj)	51	58	46	49	50
	Avg N License Months	8	8	9	9	8
Tuna	Total GRT (adj)	29,980	30,216	31,460	25,786	18,871
	Avg Vessel GRT	714	703	767	739	642
	N Vessels	42	43	41	46	30
	N Vessels (adj)	42	43	41	33	29
	Avg N License Months	12	12	12	8	11
Total No Vessels Licensed		172	199	160	136	176
Total No Vessels (Adjusted)		124	137	117	97	113
Total No Vessels (Official DGP Data)		172	190	157	143	183

NB. Adjusted refers to the calculation of total effective GRT and number (N) of vessels, considering the number of months for which a specific vessel was licensed to fish during the year.

This comparison shows that in fact adjusted fishing effort (in terms of number of vessels) peaked in 2003, and declined by about 10% in 2004. With respect to the shrimp fishery however, this is not considered sufficient to make any significant impact on the shrimp.

The consultants therefore consider that the need for effort reduction in the trawl fishery would be best addressed by greater overall reduction effort in the shrimp trawl fishery. Judging from the comments of stakeholders, there is general consensus on the need to reduce the fishing effort for this segment, including Europeans and Chinese fleets.

Effort reduction in the industrial shrimp fishery is therefore indicated and in Section 2.2.5 a recommendation is made by the consultants to this effect, in relation to the sustainability of the fisheries partnership agreement. Given the uncertainty concerning the current state of the stocks, it is recommended that this should be in the region of 35%. Fishing effort for demersal finfish and cephalopods may be retained at the current level without prejudice to sustainable fisheries.

Effort reductions will benefit the remaining vessels in the fishery in that catch rates would be expected to increase. However, it is essential that this effort reduction be combined with other management measures in order to rebuild an apparently overexploited stock. The proposals are:

- Delimit fishing grounds for specific resources such as deep-water or shallow-water shrimp and restrict the use of small mesh sizes (40mm) to these areas only;
- Define and enforce seasonal closures for these two types of shrimp;
- Improved monitoring and control of the inshore fishery for shrimp (juveniles);
- Mandatory use of fish excluding devices in the shrimp fisheries in general.
- Reduce or eliminate IUU fishing by improved surveillance activities

These proposed management measures would have some impact on the economic performance of the fishery. Firstly, the number of vessels which would have access would be reduced, from an estimated total of 51 down to 34. Seasonal closures would also lead to further effort reduction by remaining vessels. However, discussions with the fishery stakeholders (including the FEDERPESCA and CONAPEMAC) suggest that these measures are considered to be essential. This will also benefit the deep-water shrimp stock. The measure is expected to result in higher catch rates in the medium term for all shrimp vessels and a more sustainable FPA.

There will probably be a general resistance to fish excluding devices in the shrimp fisheries, but this measure is also considered an important means of reducing discards. The species composition of EU vessel catches indicates that discards are generally higher, as only a few species are considered of economic interest (e.g. Cephalopods, Soles, Hake, Crab, *Sparids*). As presented in the previous section, discarding in the waters off Guinea Bissau appear to be substantial and may have resulted in excessive fishing mortality, even higher than for commercial species. Furthermore, the high fishing mortality for associated species such as Catfish, Meagre, Threadfins, and some Flatfish will be reduced also.

Very little is known about the inshore shrimp fishery, which is thought to have a direct effect on recruitment in the offshore fishery. In order to rebuild the shallow-water shrimp stock, a management plan for this fishery may also need to be considered.

2.2.5.3 *Regional large pelagic fisheries*

Table 32 shows a summary of the current recommendations regarding the large pelagic fish subject to ICCAT management. More details are provided in the following paragraphs.

Table 32 : Management recommendations for tuna and tuna-like species in the Atlantic based on the assessments by ICCAT.

Species		Measures for 2004	Expected change in 2005
Skipjack		No specific measure	
Yellowfin	Minimum size	3.2 kg (15% tolerance in the number of landed fish)	None
	Fishing effort / Catches	Effective fishing effort not to exceed 1992 level	None
	Moratorium	Closed area/season for fishing on FADs : from 1 Nov. to 31 Jan. of the the following year ; from the African coast out to meridian 20° W, between latitudes 4° S and 5° N	Surface fisheries (seiners and baitboats) prohibited between 1-30 Nov. each year in the area between meridians 10° and 20° W, and between latitudes 0° S and 5° N
Bigeye	Minimum size	3.2 kg (15% tolerance in the number of landed fish)	No restriction on size
	Fishing effort / Catches	Limit vessels to the average number (larger than 24m LOA) fishing in 1991 and 1992 ; Limit catches to the average taken in 1991 and 1992 (not applicable to those who reported 1999 catch in 2000 was less than 2 100 tonnes)	Limit the number of fishing vessels to those reported in 2005 TAC of 90 000 t for the period 2005-2008 ; EU quota starting at 25 000 t and decreasing to 24 000 t in 2008
	Moratorium	Closed area/season for fishing on FADs : from 1 Nov. to 31 Jan. of the following year ; from the African coast out to meridian 20° W, between latitudes 4° S and 5° N	Surface fisheries (seiners and baitboats) prohibited between 1-30 Nov. each year in the area between meridians 10° and 20° W, and between latitudes 0° S and 5° N
Swordfish (North Atlantic stock)	Minimum size	125 cm (25 kg), with a 15% tolerance, or 119 cm without tolerance	None
	Fishing effort / Catches	TAC of 14 000 tonnes, of which 6 700 tonnes for the EU	None
	Moratorium	None	None
Blue Marlin and White Marlin	Fishing effort / Catches	Reduce pelagic long-line and purse seine landings of Blue Marlin to 50% (33% for White Marlin) of 1996 or 1999 levels, whichever is greater	Continuation of stock re-building plan through to 2006
Sailfish		No specific measure	
Sharks	General	Catches should be reported to ICCAT	Full utilization of shark catches required (except head, guts, skins) ; Fins may not constitute more than 5% of the total shark catches.

2.2.5.3.1 Tunas

In terms of migratory stocks of large pelagic fish exploited in Guinea Bissau waters, management policy should take account of the wider stock situation in general and ICCAT recommendations in particular.

According to ICCAT, most of the major commercial tuna stocks are now more or less fully exploited across the Atlantic. Bigeye tuna is considered subject to excessive effort, especially of juveniles, which has led to a recommendation for a seasonal moratorium on the use of FADs by purse seiners. This management measure has also had effect on the fishery for yellowfin tuna and skipjack tuna to a lesser extent. Further measures concerning both bigeye and yellowfin tuna have been the definition of minimum sizes, which have not been very effective due to the multispecies nature of tuna surface fisheries, and limits on fishing capacity (maintaining the 1991/1992 level). In 2005, the expected changes concerning the management of bigeye tuna are restrictions concerning number of vessels and the establishment of TACs as well as a modification of the moratorium (minimum size limits on bigeye will be eliminated). The new definition of the moratorium has made the closed area smaller (known as the Picolo area) and the time period shorter, but it has become more controllable with the use of VMS systems. This revised moratorium will also have bearing on yellowfin tuna. Note that this management measure has in fact no impact on the tuna fisheries carried out in the waters off Guinea Bissau.

Yellowfin tuna is also close to fully exploited and has minimum size recommendations in place and a recommendation that fishing effort should not increase over the 1992 level. Although there are no TAC levels set, increases in fishing power of purse seiners have given rise to concern, which may indicate that a slight reduction in vessel numbers may be necessary to meet management objectives. However, the measures that have been approved for bigeye tuna (but still not officially binding) will most probably have a beneficial effect on yellowfin tuna also.

It has generally been difficult to assess the status of skipjack tuna stocks due to data limitations and their "viscose" nature, meaning that there is low interchange between areas, but a minor proportion of the stock may undertake large-scale migrations. Thus, what may appear as locally over-exploited skipjack appears to have little, if any, repercussion on the abundance of the stock in other areas. However, there is some concern about the eastern stock status, although the results of analyses are inconclusive.

2.2.5.3.2 Swordfish

With respect to the North Atlantic stock of swordfish, the most recent assessment (2002) indicated a stock that was recovering, as a result of improved recruitment since 1997. Current biomass is estimated to be close to the biomass at MSY, indicating a stock recovering a healthy status. The stock is subject to a management recommendation by ICCAT that catches do not increase beyond the current level of 14 000 tonnes/year as well as minimum size limits, which have been upheld in the interest of maintaining a sustainable fishery for swordfish.

2.2.5.3.3 Sharks

There is a lack of reliable data on which to base a definitive stock assessment in relation to the main commercial shark species. There is evidence of a significant decline in the abundance, particularly of blue shark, where there is considered to be a single Atlantic stock. Overall, the poor reporting of the EU long-line fleet in general, and of shark catches in particular, provides insufficient basis for resource management decisions. Given the evidence of declining abundance a precautionary approach is therefore advisable, with a reduction of targeted fishing effort highly desirable.

Sharks are a valuable target species for the EU surface long-line fleet in this region. There is also an important artisanal fishery directly targeting sharks. The main coveted product is shark fins, which are dried and targeted at Asian markets. It is believed that, in common with other regions, pressure on shark stocks is too high and unsustainable. The extinction in Guinea Bissau waters of the common sawtooth fish,

a cartilaginous species (*Pristis pristis*)²³, underlines the vulnerability of these species to excessive fishing pressure. The pressure is such that documented local extinctions of targeted species have already been recorded (e.g. the case of the common sawfish), while numbers and sizes of other target species, such as the valued “Djafal” – the Bonga shad (*Ethmalosa fimbriata*), are decreasing at a worrying rate.

An important development is expected to take place in 2005 concerning the management of large pelagic shark species in the ICCAT context. Shark-finning is expected to be banned and a maximum fin limit of 5% of retained shark catch weight is expected to be applied. These management measures have been approved but await ratification procedure to become officially binding. It is noted that as a non-member of ICCAT, these restrictions will not be binding on Guinea Bissau, whereas they will apply to EU flagged vessels fishing under the EU-Guinea Bissau Protocol.

2.2.5.4 Overview of stock status and utilisation potential in the Guinea Bissau EEZ

Potential sustainable yields, based on the best estimates of stock conditions available are given in Table 33 (for inshore resources) and Table 34 (for offshore and large pelagic resources). These are necessarily estimates since the waters off Guinea Bissau are considered to be an important spawning and nursery ground for regional stocks, implying that the abundance of exploitable biomass varies as a result of feeding and spawning migrations. This is also the case for tuna and tuna-like species, which migrate through the EEZ as part of a migratory feeding pattern. In the case of demersal fish species, migration does not occur over extended distances such as in the case of pelagic species, but it is nevertheless an important determining factor in seasonal abundance²⁴. In the case of short-lived species such as Shrimp and Cephalopods, abundance and potential sustainable catches will vary substantially from year to year, depending on recruitment, predation and fishing mortality as well as environmental conditions.

There is evidence that the shallow water shrimp resources are subject to excessive and unsustainable fishing effort, and would benefit from a reduction in fishing pressure. In relation to the official Fisheries Management Plan, the TACs and total GRT specified for 2005 and previous years indicate that the only fishing possibility that is being used to its full extent is shrimp trawling (see section 2.2.5.1 regarding the description of the fisheries management plan).

In 2005, total allowable effort for shrimp trawlers was set at 11,000 effective GRT, which according to the consultant's stock assessment should be reduced by an amount of the order of 30-35%, to around 8,000 GRT. Whilst the shrimp resource condition in deeper waters is not fully known, it is likely to be fully exploited. Cephalopod resources are probably fully exploited and there is no justification for an increase in effort. Demersal fish resources could sustain higher level of exploitation under careful monitoring. Small pelagic fisheries, both coastal (mulletts and shads) and oceanic (mackerel and sardinellas) are exploited at levels well below the limits of sustainability.

Throughout the entire fishery, improved catch reporting and observer data should be used to improve information for stock assessment. This is especially so considering the unknown impacts of IUU fishing, as well as the effects of discarding in Guinea Bissau, which have yet to be resolved.

With respect to the offshore resources, skipjack tuna resources are not considered to be exploited in excess of sustainable levels. Yellowfin tuna is thought to be fully exploited. However in relation to tunas, the Guinea Bissau EEZ contributes little to the overall level of exploitation. The large pelagic resources of swordfish are considered to be fully exploited. Blue and mako sharks appear to suffer from unsustainable levels of fishing mortality and a reduction in effort may be indicated, although more data is required for a specific assessment.

²³ last caught in 1997, but still listed as a critically endangered Guinea Bissau species on the IUCN Red List

²⁴ CECAF 1979

Table 33 : Inshore fish resources: Overview of potential yield and probable current levels of catches (tonnes) in the GB EEZ.

Demersal Resources	Description	Annual Potential Yield	Probable Catch	State of Stocks
Nearshore at Depths 0 – 50 m (Only accessible to Artisanal Vessels)	Fish (Sciaenid Community)	20 - 30,000 ²⁵	10 – 15,000	low exploitation
Continental Shelf Depths of 20 – 200 m	Fish	30 - 40,000	20 – 35,000	fully exploited
	Cephalopods	4 - 6,000 ²⁶	2 - 5,000	fully exploited
	Shallow-water shrimp (<i>Penaeus notialis</i>)	3,000 - 5,500	1,500 - 2,000	overexploited
	Other shrimp	1,000 (?)	1,000	not known
Continental Slope Depths of 100 – 400 m	Deep-water shrimp (<i>Parapenaeus longirostris</i>)	1,200 - 1,500	1,500 - 2,000	fully exploited (maybe overexploited)
Total Commercial, Demersal Resources	Various species accessible to Industrial Vessels	40 - 54,000	26,500 - 45,000	
Total Demersal Resources		60 - 84,000	36,500 - 60,000	
Pelagic Resources				
Coastal waters (only accessible to artisanal vessels)	Mulletts and Bonga shad	100,000 ²⁷	20 – 35,000	low exploitation
Wider Continental Shelf Area	Small pelagics (Sardinellas, Scads, Horse mackerel)	25 - 250,000 ²⁸	16 – 24,000	low exploitation

Sources:

²⁵ Based on productivity estimates in CECAF 1979²⁶ Based on other assessments; FAO/WB 2003; Diop et al. 2004²⁷ Based on Longhurst 1983; Amorim et al. 2005²⁸ Based on successive Firdtjof Nansen surveys; Saetersdal et al. 1999

Table 34 : Offshore fish resources: overview of potential yield and probable current levels of catches in the offshore fisheries

Resources	Potential	Catch in 2003	Under-exploited opportunities
	Tonnes		
Yellowfin	148,000	124,000	NIL (not to exceed 1992 effective fishing effort; area/season closure)
Skipjack (Eastern stock)	n/a	123,500	NIL (the Guinea Bissau area is considered a poor tuna fishing ground)
Bigeye	100,000	85,000	NIL (TAC and vessel number limits; area/season closure)
Swordfish (North Atlantic)	14,000	11,000	NIL (TAC and size limits)
Sharks	Not known	Excessive	NIL (significant depletion of main target species)

Source: ICCAT

2.3 HEALTH AND SANITARY CONDITIONS

Guinea Bissau has not met the health conditions laid down for third countries in Directive 91/493/EEC on health conditions for the production and placing on the market of fishery products for human consumption. The country is not on List 1 or 2 of Commission Decision 97/296/EC of 22 April 1997 "drawing up the list of third countries from which the import of fishery products is authorised for human consumption" (as amended). Therefore, since mid-1998 (when bilateral export arrangements were terminated) it has not been able to export fishery products to the EU. So far the Competent Authority has been unable to provide the necessary guarantees to DG SANCO regarding the organisation of the health controls and the laboratory provision.

For several years the matter was held up by a dispute over regulatory competences for health conditions between the Ministry of Agriculture and Ministry of Fisheries. This appears to have been resolved and CIPA is to be nominated as the Competent Authority. It has established a testing laboratory with some relevant capacity, and the equipment they have is good. However, there is:

- weak laboratory management and quality assurance procedures which do not meet accreditation standards
- lack of trained inspection staff
- weak/non existent regulatory framework for health controls
- overall weak understanding of the requirements by the staff of CIPA.
- no capacity within industry for implementation of HACCP standards

The continuing lack of inspection and certification capacity remains a barrier to the development of a fish export trade. Therefore, since Guinea Bissau has not met the health conditions required by Directive 91/493/EEC, Guinea Bissau flagged freezer vessels are prohibited from supplying the EU market. As a result of this disincentive to sail under the Guinea Bissau flag, many vessels have re-flagged to countries which meet the health conditions. However at least 5 Guinea Bissau vessels are currently operating, some of which may have European beneficial owners. It is suspected that they may supply the EU market via an establishment in another third country. However, given that some European imports of Guinea Bissau fishery products are registered in EUROSTAT data it would appear that they are also supplying the EU market directly.

In the meantime the lack of compliance will continue to represent the major barrier to the future development of the fishery sector. This continues to effectively prevent private sector investment related to:

1. Development of high value fishery product exports from the existing artisanal fishery (such as demersal fish species, air freighted fresh to the EU market)
2. Extension and development of the national fishing fleet to exploit the large pelagic fish resources within the EEZ (tuna, swordfish etc) currently accessed by foreign fishing vessels
3. Landing and shore-based processing of fish caught by the foreign vessels fishing within the EEZ

The health controls system is in the process of receiving considerable support from various sources:

- Between 2001 and 2003 support of around 500.000 US\$ to the Competent Authority (CIPA) was delivered by the EU and FAO, targeting mainly the laboratory. EU support through the Fisheries Agreement funds comprised mainly the refurbishment of the laboratory building and acquisition of equipment totaling around 350.000 US\$.
- More recently, during 2004 the UEMOA Regional Quality Programme, implemented in Guinea Bissau through the General Director of Industry, will further support the development of the laboratory system. This Regional Programme has the objective of placing a system of accreditation,

certification, standardisation and promotion of quality within the region, which should be implemented until the end of 2005. Funding is through PARI II-Private Sector totalizing €14 million (from the EDF) for the region. An identification mission in Guinea has already taken place in February 2005 by the National Technical Coordinator of Togo.

- There are also plans to include Guinea Bissau in a regional component of the EDF Funded Project “Strengthening Fisheries Products Health Conditions in ACP/OCT Countries”, with an indicative allocation of €946,700 over two years. This project is likely to start in late 2005.

2.4 LOCAL FISH TRADE AND DISTRIBUTION

2.4.1 Landings from industrial fisheries

By-catch rates and minimum fish sizes are regulated for most types of fishing operations. Fisheries agreements stipulate allowed by-catch rates for given gear types. These rules are generally neither respected, nor enforced. Under the 9th Protocol EU vessels pay a licence premium for the non-landing of by-catch proportions from the demersal trawl fisheries, and this is paid by all operators. Observer data clearly show that specific fleets continually realise by-catch rates of over 95% in given operations (e.g. shrimp fishery). There is clear evidence from the infractions detected that Chinese and FEDERPESCA fleet segments, use permitted gears to target other species groups (e.g. shrimp trawls are deployed to target fish or cephalopods).

These landing requirements (expressed as weight of fish / GT / unit of time) do lead to a modest amount of fish being landed in Bissau. Table 35 renders fish landing data obtained from the APGB for 2003 and 2004. These can be readily considered as the only and total industrial fish landings for Guinea Bissau for those two years, as no other operational industrial landing facilities exist in the country.

Table 35 : Industrial fish landings in Guinea Bissau for 2003 and 2004

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	total
2003	320	206	219	427	321	322	337	165	173	301	432	315	3,538
2004	165	60	490	240	493	177	467	446	261	219	189	377	3,584

Source : Administração dos Portos da Guiné-Bissau

Frozen fish landed by the industrial fishery (under the CONAPEMAC and FEDERPESCA Agreements) is received by the Distribution agents, and then sold in bulk to re-vendors. This comprises about 3,500 tonnes of fish in 2003 and 2004, generally lower value species (sweetlips, sciaenids, rays etc). The fish received is stored temporarily in a cold storage facility in the Bissau Chinese-SME Industrial Fisheries project. The “Projecto de Pesca Semi-industrial” also operates 3 semi-industrial freezer trawlers, with the purpose of supplying fish to the local market.

The selling price of fish landed from this sector is regulated, with the price held low to meet social objectives. As a result, industrially caught fish is placed at below market price in the Bissau markets (certainly at first sale), and allocation of rights to receive and market this catch are subject to political patronage. The price issue is a deeply institutionalised situation, with the Ministry of Fisheries not having sufficient political leverage to overcome the vested interests of officials and the distribution agents. In recent years there has been considerable unrest when Government tried to eliminate the price controls.

Markets in Guinea Bissau are uninteresting to national and foreign industrial operators alike, due to a range of structural weaknesses and disincentives, which include the non-existence of onshore processing facilities, the lack of strong and steady demand for fresh or semi-processed landings for further value addition, and high fees linked to docking, bunkering, and other harbour administration and customs fees.

Locally, fish is distributed in frozen or thawed condition. However, the majority of the industrial catch landed enters the small scale smoking-drying processes for onward distribution to national and regional markets. There are no modern processing and distribution facilities.

There is no ice supply or any refrigeration facilities for fresh fish marketing and processing activities. At present there is no link or strategy to establish fish export operations for high value products from artisanal fishing. This is considered by the consultants as an essential step for the development of the entire sector, and would contribute decisively to poverty reduction in the region.

2.4.2 Landings from small scale fisheries

As indicated previously, little is known of this fishery since there has never been any comprehensive study undertaken. Estimates of the total artisanal catch in Guinea Bissau are uncertain. A compilation of available estimates indicates that total catches may be in the order of roughly 30-50,000 tonnes per year, most of which is taken by foreign artisanal fishers. Mulletts and Bonga shad dominate artisanal catches (about 70%), but other species groups are important such as Croakers, Grunts, Barracuda, Threadfins, Sharks and Rays²⁹. Also, there is a significant juvenile shrimp fishery in the Cacheu River. A significant proportion of the small scale production is smoke-dried in Guinea Bissau, for domestic consumption as well for export, by land and sea, to neighbouring countries.

Domestic consumption of fish is thought to be extremely limited except in coastal areas. Several authors report that the main tribes of Guinea Bissau are pastoral farmers without historical traditions of fishing and fish consumption. Local opinion suggests that some 15 tonnes/day of fish might be sold on the local market, and that *per capita* supply within the city might be up to 4 times higher than elsewhere in the country, where it is thought to be less than 7kg per capita per annum. The development of the domestic market for fresh fish is extremely limited by the lack of market infrastructure (markets, roads, ice), and for smoked-dried fish by the cost and limited fuel supply. Development of the small scale sector is also inhibited by the shortage of fuel, limited access to and high prices of means of production, and lack of credit. For the same reasons there are no linkages between the small scale fishery and international export markets. Gaining EU market access will encourage growth of "value added" activities e.g. fish processing and packaging, and whilst it is not likely to have much short term impact on the industrial fishery, it could be expected to provide opportunities for improved incomes in the small scale sector.

One of the few tangible sources of revenue benefits for Guinea Bissau is export taxation levied by customs on smoked artisanal fish destined for neighbouring countries, however, the largest part of artisanally processed fish commodities migrates out of the country unrecorded, by sea.

2.5 PORTS AND INFRASTRUCTURES

2.5.1 Port facilities

The main industrial port is located in Bissau. The competent authority for the management of the port and vessel movements is the *Capitanía do Porto*, which falls under the Ministry of Transport.

For a coastal island state, the ports and onshore support infrastructure are weak. Many of the land-based and buoyed approach lights to the Bissau harbour facilities are in disrepair. Tide range is up to 6m, with an 8 knot flow making access difficult.

²⁹ DGFA 1994

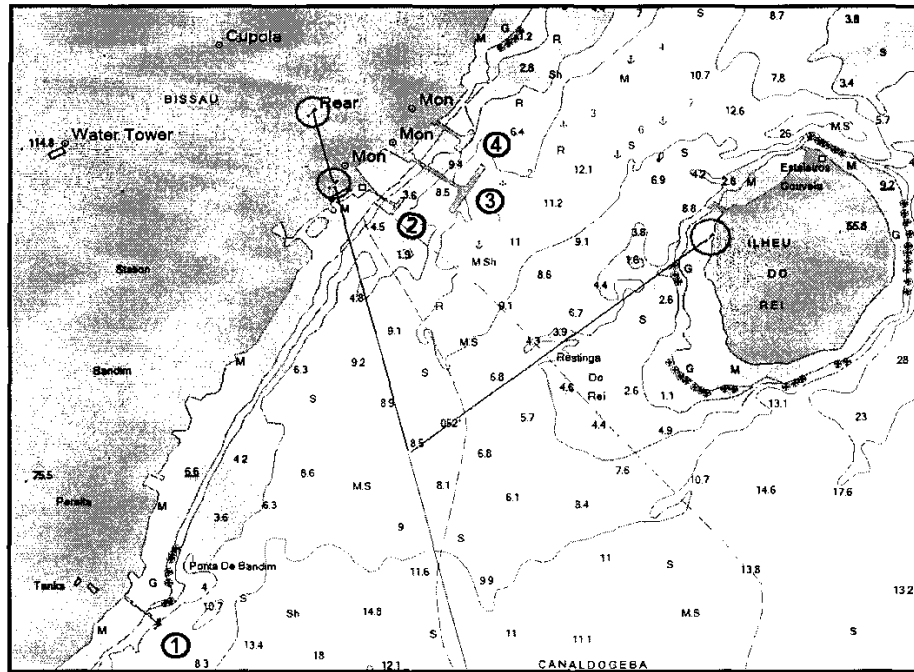


Figure 5 : Map of the port facilities area, with the piers numbered from 1 to 4.

The port facilities of Bissau comprise 4 piers, which allow anchorage for ocean-going vessels. Figure 5 reproduces a map of the area, with the piers numbered from 1 to 4. The first one of these piers is located at the southern end of the port facilities, and is a hydrocarbon terminal. The other piers are concentrated further north, facing *Ilheu do Rei* island. The northern most pier is used by the industrial fishing vessels which call into port. A smaller jetty at Alto Bandim serves the semi-industrial Project financed until now by the Chinese (Project de Pesca Semi-industrial) and the artisanal fisheries. This site includes cold storage facilities (300t capacity) 4 containers (30t capacity each), and 2 flake ice-making facilities (25t/day). Also there is an auction facility (which is not used). All installations are in bad repair. The site is due for redevelopment under the Project for Support of the Fisheries Sector in Guiné Bissau (PASP project) partially funded by ADB and the remaining to be identified. This proposed investment includes the construction of an industrial fishing harbour in order to dynamic the development of the sector.

Other seemingly operational ports in the country include Bolama, Buba, Bubaque, Cacheu, Cacine, Catão and Enxude. Another six locations exist (Binta, Cabo Xanque, Campará, Empada, San Domingo, Xime). However, these are reported to be in complete disrepair, and do not allow ships to call to anymore.

2.5.2 Fuel and other fisheries inputs

Bissau Port does not have suitable facilities or conditions for transshipment, nor fuel, water and ice supplies. EU vessels generally never call into port except for formal inspections. Most refuelling and transshipping provisions is done at sea or in foreign ports (Dakar/Las Palmas mainly). At the time of the mission the land border was closed to import of fuel to prevent black-market fuel entering the country.

Fuel for fishing activity does not have a subsidized price, being the same price for anyone in Guinea Bissau. For industrial vessels, whilst it is possible to refuel in Bissau, most refuelling and transshipping provisions is done at sea or in foreign ports, due to the approach difficulties, the high cost and lack of reliable supplies.. EU vessels generally do not call into port.

2.5.3 Ice and refrigeration

There are 15 ice production facilities in Guinea Bissau, with total daily production capacity of about 145 tonnes, 60% of which is located in Bissau. These are listed in Table 36. In addition, in the north of the country ice is supplied from Cap-Skring in Senegal.

Table 36 : Ice facilities and ice production in Guinea Bissau

Company / facilities	Capacity (t/day)	Location	Actual situation
GUIALP	10	Bissau	Not working
PPSI	30	Bissau	working
PESAC	0.9	Catio	Not working
PESCARTE/BOLAMA	9	Bolama	working
PESCARTE/BUBAQUE	14	Bubaque	working
PARALTA	2.7	Bissau	Not working
PESCARTE/URACANE	5	Ilha Uracane	working
VIGUEPESCA	10	Cacheu	working
SOEMPA	15	Bissau	working
PESCARTE/CACHEU	5	Cacheu	Not working
URSOBRANCO	6	Bissau	working
PINGUIN	6	Bissau	working
FÁBRICA/BUBA	1	Buba	working
FÁBRICA/BAFATA	1.2	Bafata	Not working
COMPLEXO F. BOLOLA	30	Bissau	Not working
Total	145.8		

Source: Ministério das Pescas

The existing capacity of ice production is not sufficient for the needs of fisheries activities, and is also in the wrong place to be of any benefit to small scale fisheries. An ice plant in Bubaque (constructed as part of the former Artisanal Fisheries Center supported by SIDA (Sweden) is projected for refurbishment with funds from the EU_Guinea Bissau FPA.

There are number of cold stores in Bissau fishing harbour. There are no data on the capacity, but they are all reported to be operational. The cold chambers in Bubaque, as well as in other former artisanal fishery centres in Cacheu and Cacine, are currently out of order. Electricity supply suffers frequent breakdowns. All cold stores operate with back-up generating capacity.

2.5.4 Ship repair facilities

In respect to vessel repair infra-structures, the only shipyard in Bissau is located in the same area of the *Capitania do Porto* (south of *Pindjiquiti* pier), and is in a state of disrepair. Only small vessels would now be able to reach the ship-yard during spring high tide, owing to the sedimentation of the area. Mangroves are growing in the approach line. The workshops and dry docks are in disrepair, and large scale multi-million euro investments would be needed to rehabilitate the locales. Currently, operators need to sail to Dakar or Cape Verde to dry dock vessels and have proper maintenance and repair works done.

There is also a functional. Ship-yard in Bolama, the *Estaleiros Navais de Bolama*, operated by a cooperative of artisans. The shipyard is the product of a project that was financed by the EU over a period of 12 years (and implemented by a Belgian NGO called *Iles de la Paix*. This seems to be one of the few projects in the country that proved to be sustainable after the project finished. Some 40 people work there, and they build some 6-8 canoes a year, including fishing canoes.

2.6 PROCESSING ACTIVITIES

There are no functional processing facilities/establishments in place in Guinea Bissau. Some establishments in Bissau were formerly used for fish processing, but they are now not operating.

Only small scale artisanal smoke processing activities are located at landing beaches. These are mostly carried out by women, using fishery inputs from small scale fisheries and some supplies from landed fish from industrial fisheries. A significant, but unknown proportion of the processing is carried out by migrant communities from Senegal.

Products are mostly distributed by sea to neighbouring Senegal and Guinea, pooling smoked fish in baskets of about 200kg each, and transporting them on large ocean-going canoes. The amount of smoked fish exported every year is very important, and is no doubt of importance in terms of food security in the markets where it is sold. Fish have been reported to go as far as Mali. However, due to the clandestine nature of the activity and trade, no data exist.

2.7 AQUACULTURE AND INLAND FISHERIES

There is no ongoing aquaculture activity in Guinea Bissau. CIPA of the Ministry of Fisheries has supported two projects; both have ceased:

- In 1988 a mixed production of shrimp and rice was attempted in the south at Catiô using *Macrobracium rosenberg*. Some training was undertaken in Vietnam and Thailand.
- In 1993 a preliminary survey to identify potential aquaculture sites was undertaken by CIPA

Whilst there may be potential for culture of species such as shrimp and tilapia, the current political and economic situation militates against any investment of this nature.

Inland fishing is practised along the length of the extensive river system. However no data are available on this activity.

2.8 INTERNATIONAL TRADE

2.8.1 Import and export tariff regime for fishery products

Although there is an "imposto extraordinário" of 6% on the export of cashew nuts and another export duty rate for non-processed agriculture products, there is no export tax for fish. Despite the evidence to the contrary (EUROSTAT and anecdotal evidence of dried fish exports to regional markets) these activities appear to be not subject to customs control.

Under the aegis of the UEMOA , broad-based import tariff reform was been implemented in 1999 (so-called common external tariff). The number of tariff categories were reduced from 7 to 4, and since January 2000, only 4 statutory tariff rates have been applied, set at 0,5%, 10%, and 20%. Varying rates are set for different fishery products imported from the European Union. Most trade within the UEMOA is free of duties. Import duties on products imported from the EU will be progressively eliminated under the ECOWAS EPA, due to be implemented from 2008. Guinea Bissau as a signatory of the Lomé convention is able to export fishery products to the European Union without any duties.

2.8.2 International trade in fishery products

Table 37 shows the Guinea Bissau/EU trade in fishery products. It is notable that up to 2003, significant levels of fishery products (about €5 million in 2003) ere exported from Guinea Bissau, substantially to Italy, but also to a small extent to Spain. Such exports are believed to have originated from Guinea Bissau flagged demersal trawl freezer vessel(s). The species mix suggests that the vessel(s) concerned operated in West African waters. It is noted that the admission by a Member State's Competent Authority of such products to the Community market is in contravention of the provision of national legislation implementing the provisions of Directive 91/493/EEC on health conditions for the production and placing on the market of fishery products for human consumption. Imports to Guinea Bissau from the EU are minimal and directed at the small expatriate market.

Table 37 : Guinea Bissau fishery products trade with the EU, 2001 to 2003

	2001		2002		2003	
	Value (€1000)	Quantity (tonnes)	Value (€1000)	Quantity (tonnes)	Value (€1000)	Quantity (tonnes)
GB exports to GB						
Frozen seafish (not specified)	628	583	1,132	685	1,623	1,296
Frozen cooked penaeid shrimp			195	24	120	15
Frozen cooked non-penaeid shrimp			454	117	655	188
Frozen cuttlefish			1,255	530	1,569	769
Frozen Octopus			523	202	1,037	477
Other			<1	<1	12	9
TOTALS	628	583⁽¹⁾	3,559	1,558⁽²⁾	5,016	2,753⁽¹⁾
GB imports from EU						
Frozen small pelagic fish	37	73				
Frozen salmon			1	<1	2	<1
Salted preserved cod	4	1	6	1		
Canned mackerel, tuna and sardine			33	26	56	33

TOTAL	41	74	40	27	58	33
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Note

(1) All to Italy

(2) All to Italy except 250kg dried products to Spain

There is clear potential for a significant development of the fish trade from Guinea Bissau in future. This depends on upgrading of health conditions and certification to meet EU hygiene requirements, investment in port and commercial/transport infrastructures and an improvement in the investment climate for fish processing.

Imports from the EU accounted for just 34 tonnes in 2003 with a value of €58,000. The types of products have varied over the years although for the last 2 years mainly canned fish products have been involved. In 2000/2001 it was mainly frozen sardines and mackerel.

2.9 FISHERIES POLICY FRAMEWORK

2.9.1 Policy formation

Fisheries policy is the domain of the Ministry of Fisheries. Some of the policy-related work is undertaken by the Juridical Unit of the Ministry, but there is no focal point for policy analysis and development. Policy development and sectoral management are largely undertaken by *ad hoc* working groups on an as-needed basis. There is no formal consultation with stakeholders and no mechanism to do so. Management plans (see below) are issued as a “*Despacho Conjunto*” of the Ministry of Fisheries and Ministry of Finance.

The most recent major sectoral policy statement was formulated in 1995 in the “Plano Director de Pesca Industrial” by the Ministry of Fisheries. A current 4-page document “Plano de Gestão das Pescas 2005” (Despacho Conjunto 2/2005) represents a combined management plan and policy statement, in the form of a bulleted list of actions. This forms part of the Government’s efforts to set up a national work plan for the transitional government. This statement developed by the Ministry of Fisheries appears to be a concentrated programme of all recommendations made by donors and other missions over the previous decade, the completion of which would see Guinea-Bissau endowed with a healthy fisheries sector.

However the plan is weak on analysis leading up to the measures, and on the consequential implementation means. Its successful implementation will take several years of dedicated governments working in the same direction. There is currently a need for a much more focused, phased, realistic and achievable approach to fisheries policy, based on a thorough analysis of the salient facts, and originating from the sector’s managers and leaders with appropriate consultation with stakeholder groups.

2.9.2 Policy Objectives; Coherence and Integration

There is no single source for the main provisions of current policy. Policy provisions are inferred from the Programme of Government (2004) (source), the current activities of the Fisheries administration and the Plano Gestão das Pescas 2005. The Programme of Government recognizes the importance of the national fisheries sector as a potential source for permanent employment capable of generating significant financial resources. It also recognizes the serious difficulties that the sector has been facing in the last decades, concerning the management, assessment, control and surveillance of the fishing resources. The

Government has declared its commitment to adopt policies for improving the management of these resources, based on the following principles:

- Long term protection of the national interest;
- Optimization of the profits by promoting responsible fishing;
- Respect for the ecological balance and biological diversity;
- Durability and sustainability

The Programme of Government proposes a set of legislative and regulatory actions foreseeing the adoption or review of several legal instruments, including the fisheries law and regulations for industrial and artisanal fishing, and fisheries surveillance activities. The Programme also establishes as a priority the harmonisation of the fisheries policy with the principles of international and sub-regional fisheries bodies of which Guinea Bissau is a member. Whilst these general policy objectives at Government level are sound, so far there has been little attempt to translate them into specific sector policy measures. The current sectoral policy as expressed in the “Plano Director de Pesca Industrial” of the Ministry of Fisheries puts forward the following general objective:

“Guarantee the knowledge of the state of fisheries resources, through scientific research campaigns, with the view to securing economically sustainable exploitation of said resources, which would provide the conditions for GNP growth, on one hand, and promote the strengthening of international cooperation, thus guaranteeing responsible fishing in territorial waters of the country.”

As a policy objective this appears to be rather unbalanced, since it does not recognise the positive economic, social and food security impacts of fisheries activity. It overlooks the need to include targets relating to employment and incomes, exports, sectoral development and management. Furthermore, the main focus here is on the industrial fisheries and misses the opportunity for fisheries to contribute to poverty reduction³⁰.

At the same time, current actions of Government indicate that the following priorities are being promoted:

- Ensure a sustainable exploitation of marine resources
- Maximisation of revenues and benefits from the industrial fishery
- Development and promotion of exports
- Ensure food security for the poor by statutory price controls for first sale of fish
- Provision of general support for small scale fisheries (via Pescarte)

It is clear that there is a lack of linkages between the Fisheries Policy statement of the Ministry of Fisheries and other areas of policy. In fact the 2004 Strategic National Document for Poverty Reduction, with respect to Agriculture and Fisheries, states: *“One may also refer to the lack of effective implementation of sectoral policies, leading to a lack of harmonisation and integration of development efforts, contributing hence to the rise of poverty levels in the primary production sector”*. The lack of strong and coherent policies guiding the management and development of the fisheries sector towards poverty reduction is apparent at every level of the State apparatus. In fulfilment of this programme there is an urgent need for a simple, focused, realistic, phased and collectively supported and adopted *Strategic Development Plan for the Fisheries Sector* leading to clearly defined measures that reflect the broader economic and developmental needs of Guinea Bissau.

³⁰ An example would be that since most fishermen are subsistence fishers, the simplification of the licence procedures would appear to be a relatively desirable support measure for this sector, with direct PR benefits.

2.9.3 Ministry of Fisheries: Institutional Capacity

2.9.3.1 Organisation structure

The State Secretariat for Fisheries was founded in 1977. This organisation was eventually absorbed within the Ministry of Agriculture and Fisheries. In 1989, the State Secretariat for Fisheries was dissolved, and a fully-fledged Ministry of Fisheries, headed by its own Minister, was founded. The Minister has a seat in the Council of Ministers.

The organisation structure of the Ministry is relatively simple. There is a General Directorate for Fisheries under the direct control of the Minister. Under this Directorate is the Directorate of Industrial Fisheries, in charge of administering the industrial fisheries sector. It is further sub-divided into two departments, the Department of Fleets, and the Department of Industry and Markets. The former department is in charge of licensing issues, the latter of the post-harvest sector. There is also a "Planning office", a relic of the colonial administration.

There are three independent Directorates with separate legal identities. These are CIPA (Centre for Applied Fisheries Research), FISCAP (Commission on Fisheries Surveillance, responsible for MCS activities) and PESCARTE (General Directorate for Artisanal Fisheries). PESCARTE (responsible for small scale fisheries) is a Functional Directorate subordinate to the General Directorate of Fisheries and CIPA and FISCAP are both autonomous services of the Ministry of Fisheries. Please note however that the statutes of the last two had not been published at the time of consultants' assignment. However the administrative and financial independence of these Directorates exists largely on paper only. Projects, such as the World Bank funded and ADB funded projects, are directly subordinate to the Directorate General for Fisheries.

There are several regional fisheries offices, headed by regional fisheries representatives. These liaison offices are mostly tasked to deal with vessel and licence issues in the artisanal sector.

2.9.3.2 Personnel and human resources

There are 145 regular members of staff at the Ministry, including 12 fisheries inspectors. In addition to this, there are 200 fisheries observers managed by FISCAP. With respect to observers, it is reported that many of these no longer embark, although they may still be receiving payment. Reorganisation of this corps is underway.

The educational level of the regular staff is shown in Table 38. Illiterate and barely literate civil servants form 58% of the staff. This is a significant limiting factor for the Ministry. Observers have no more than basic education, and positions appear to be awarded under patronage rather than on merit

Table 38 : Education levels of staff employed by Direcção das Pescas

Education Level	Number of Staff	%
Higher	25	17.3
Secondary	36	24.8
Primary	38	26.2
No education	46	31.7

Salaries across the board are very low by any standard. While a Director might come close to earning €150/month, most regular staff earn less than €75/month, barely above the poverty level. This is a source of constant discontentment and demotivation. In addition to this, the former government accumulated salary arrears, which vary between 6 and 12 months for every individual in the system. Salary arrears are

now being carried forward, with the current government refusing to acknowledge responsibility, contributing to further discontent. Payment of current salaries is also in arrears by 2 to 4 months.

Whilst the number of staff and observers are adequate, their level of education, lack of adequate salaries and demotivated conditions result in a substantial level of organisational dysfunction. However, it should be mentioned that this condition is common to other Ministries, and general civil service reform is much needed. Meanwhile, for the fisheries sector, there is a need to prepare a phased plan for institutional strengthening of the Ministry of Fisheries to guide the reform process.

2.9.3.3 Organisation and functions of the Ministry

The 1998-1999 conflict has resulted in a flight of human capital, with the brightest and best elements of society leaving the country. The war also deeply impacted social transactions, and distrust underpins most professional exchanges.

There is a frequent change of Ministry and head staff reflecting shifts in political patronage, with associated changes in fisheries policy. This results in a generally low implementation capacity across the entire range of fisheries management functions. Devolution of responsibilities to middle management under established rules and procedures hardly exists, with even basic responsibilities concentrated in the hands of the Minister and a few Directors. This leads to delays and loss of time at all levels, and limits the efficiency of middle managers.

The overall effect is that there is a limited technical capacity of the Ministry to collectively manage the fishery sector. However, on the positive side, it is evident that most departments within the Ministry are functionally active to some degree or other; there are groups of staff of reasonable quality who, given training and responsibility, could be expected to deliver work of a reasonable quality. In general, all departments are equipped with working computers with reasonably up to date software (albeit with lack of consumables).

2.9.3.4 Financial Capacity of the Ministry of Fisheries

The Ministry of Fisheries is funded by a number of sources, including the recurrent budgetary allocations, and project moneys, fisheries agreements (including the targeted action funds received from the EU-Guinea Bissau Fisheries Agreement), licensing revenues, and revenues from fines. Table 39 summarises the total planned budget, and lists the amounts allocated to the Ministry of Fisheries over the last six years. It is notable that the so-called "special funds" are off budget ie. they do not form part of the annual projected income of the Ministry.

Between 2000 and 2005, the planned treasury allocations for the Ministry of Fisheries have fallen from a total of €894,046 in 2000, to €239,237 in 2005, representing a net reduction of 73% in allocations. The allocation, which represented 1.0% of the overall state budget in 2000, represented only 0.2% in 2005. Fisheries appear to have declined in terms of budget expenditure priorities. Personnel costs have risen in percentage terms, representing 68.8% of the allocation in 2005.

In addition to the recurrent budgetary allocations, in principle 30% of penalties should be transferred from the Treasury to FISCAP along with receipts from fish sales (from mandatory landings by the industrial fisheries). The consultants were informed by the Ministry of Fisheries that currently these transfers do not occur. Budgetary allocations for fisheries expenditure are mainly subject to Ministerial level negotiations irrespective of constraints or conditions placed by legislation. Given the lack of finance for implementation of routine functions, the support measures delivered under the 9th Protocol of the EU-Guinea Bissau Fisheries Agreement, have assumed major importance, allowing key functions to be undertaken which would otherwise have ceased.

Table 39 : Programmed Budgets for Ministry of Fisheries, 2000 to 2005

	2000	2001	2002	2003	2004	2005*
Total State Budget (projected)						
	Euros					
<i>without debt</i>	136,293	141,333	141,383		138,497	154,532
<i>with debt</i>	202,315	219,560	180,469		149,620	166,488
Ministry of Fisheries Budget (projected)						
Total	1,363	1,525	1,148		697	365
Of which salaries	127	183	200		186	250
% for salaries	9.3	12.0	17.5		26.7	68.6
% of State Budget	1.0	1.1	0.8		0.5	0.2
Special Funds						
FISCAR	150	150	150		457	-
FGRH	102	102	252		290	-
CIPA	161	161	161		305	-
PESCARTE	31	31	31		381	-
Apoio Institucional	35	35	35		293	-
FGH	-	-	-			3,435
Total funds	479	479	629		1,726	3,435
Ministry of Fisheries Budget (TOTAL)						
total incl. funds	1,842	2,005	1,778		2,423	3,800

* preliminary data, not yet published at the time of the mission
Exchange Rate used 1 Euro = CFA Franc 655,957

2.9.4 The fisheries legislation

The existing legal framework for the fisheries sector comprises three main instruments:

- The Fisheries Law (Law-Decree 6-A/2000) defines the general principles for the management and conservation of fishing resources, governs the access to the resources and provides for monitoring, control and surveillance of the fishing activity (FL);
- The Fisheries Regulation (Decree 4/96) establishes the general principles governing the national fisheries resources policy, including licensing procedures, setting the conditions of access for national and foreign fishing vessels, and conservation measures (FR)
- The Artisanal Fisheries Regulation (Decree 13/97) defines specific rules for artisanal fishing based in the specific needs of the sector (AFR).

There is overlap between the scopes of the two fisheries regulations regarding the rules that govern the artisanal fishing activities. Moreover, Decree 4/96 is not in line with the more modern Fisheries Law. The many inconsistencies between them give rise to conflicting provisions and implementation difficulties. A revision of the Fisheries Regulation is long overdue.

The fisheries legal framework also includes several other legal instruments dealing with the following issues:

- Fisheries planning and management:
 - Joint Order 2/2005: establishes the fisheries management plan for 2005;
 - Decree 7/98: establishes the Fisheries Research Centre (CIPA);
- Fishing activities:
 - Joint Order 1/2005: updates the licence fees for foreign artisanal vessels;
 - Order 21/GMP/04: establishes the National Register of Industrial Fishing Vessels;
 - Order 13/2003: establishes the licensing procedures and fees for artisanal fishing;
 - Joint Order 2/2001: defines the licence fees and access conditions of industrial vessels;
 - Circular 03/DGPI/96: fixes the minimum mesh sizes;
 - Decision 21/92 : regulates fishing activity in the EEZ.
- Fisheries surveillance and control:
 - Joint Order 3/2004: regulates the subsidy granted to officers;
 - Law-Decree 4/2004: defines CIPA as the competent authority regarding health and quality control of fish and products thereof;
 - Order 05/GSEP/2003: establishes the Technical Commission (CTFM)
 - Decree 9/96: regulates the Commission of Maritime Inspection (FISCMAR).

Some of the key features of the legislation as it stands are:

- Fishing licences may be revoked or suspended to ensure an adequate management of the fishing resources, and to allow the proper implementation of the management plan (Art. 18 FL and Art. 23 FR).
- The law further prohibits the use and transport of certain equipment or dangerous substances (Art. 26) and the catching or selling of all species of marine mammals, marine turtles and sea birds (Art. 27). The establishment of closed seasons and prohibited or restricted areas is foreseen (Art. 31 FR). To date however this has not been done.
- Specific conservation measures are also provided under the RFA, prohibiting certain fishing gear, such as the use of trawl nets and boat seine in artisanal fishing zones.
- Fishing fines are determined by an Interministerial Commission, and are not set out in the Law

There is one notable inconsistency in the treatment of national and foreign fishing interests. There are no provisions in the national legislation concerning by-catch (although the disregard of the existing rules on by-catch is classified as a fisheries offence by Art. 54/1 (c) of the Fisheries Law). However, all of the bilateral agreements specify by-catch limits.

Generally, the fisheries legal framework of Guinea Bissau is in line with the international commitments of the country. However, it contains many loopholes and inconsistencies and leaves unregulated several issues by attributing discretionary powers to the public administration over many aspects of fisheries management. This results in inappropriate implementation of the legislation and inefficient enforcement. There is an urgent need for the introduction of a new framework fisheries law, and supporting regulations,

as recommended in the report of the mission “Strengthening Fisheries Monitoring Control and Surveillance and improving the fisheries legislation” supported by DG Fisheries in May 2005.

2.9.5 Organisation of MCS

2.9.5.1 FISCAP of the Ministry of Fisheries

The allocation of responsibility for the monitoring control and surveillance of fisheries activities has changed many times over the past years. FISCAP, an autonomous Directorate of the Ministry of Fisheries is currently responsible for fisheries monitoring, control and surveillance. Under the Fisheries Law FISCAP is governed by an inter-ministerial Commission (with representatives from Ministries of Fisheries, Justice, Defence, Interior and Finance), which *inter alia* deliberates on fines to be applied to arrested vessels. A coordinator is in charge of running the fisheries inspection and observer programmes. FISCAP has (in theory) administrative and financial autonomy. However, every single expense, irrespective of the amount, needs written approval by the Minister. This severely limits the effectiveness of the main FISCAP activities, the operation of the observer system, and managing marine patrols.

Apart from FISCAP, other agencies have traditionally been involved with enforcement activities related to the fisheries sector. The most notable of these are the Harbour Authority and the Navy. The Harbour authority is the competent authority to enforce the possession of a navigation licence by vessel operators when operating in Guinea-Bissau waters. Without lack of navigational means, and with otherwise limited human and financial resources, this enforcement activity is by and large non-existent. Coordination of enforcement efforts with the Ministry of Fisheries is limited to a few instances where joint patrols resulted in the arrest of artisanal fishing vessels.

With respect to the Navy, it appears that its role in fisheries law enforcement is ill-defined. Armed Navy personnel used to join fisheries patrols in the past. In certain fisheries sectors marred by illegal fishing and violence (leading to the death of officers, notably in one particular incident in 2001), the presence of armed military personnel is advisable. The Navy is therefore in charge of crewing and operating the fisheries patrol vessels. The Navy currently does not own a single operational vessel. It asserts however, that fisheries are a matter of national sovereignty, bordering on national security issues.

The Navy hence argues that fisheries surveillance falls under their responsibility. Furthermore, the Navy argues that the issuing of licences, and enforcement of the law by the Ministry of Fisheries represent an inherent conflict of interest. The Ministry of Fisheries however, especially through the person of the General Director of the Centre for Applied Fisheries Research (CIPA), argues that in law, fisheries law enforcement is a civilian law enforcement activity, not a military one, and that the Navy must come to terms with this fact.

The core issue is responsibility for mission command on land and at sea. The Navy is highly reluctant to operate vessels under civilian command, although it does not have the technical capacity to direct MCS resources where they could fulfil fisheries management objectives. There is a clear need for high level political solution to resolve this issue, which would place the Ministry of Fisheries in overall operational control of the MCS operation, with the navy responsible for vessel operations and safety at sea.

2.9.5.2 Institute for Biodiversity and Protected Areas (Ministry of Agriculture)

IBAP also organises surveillance missions, in the domain of marine protected area protection. These missions are implemented using smaller patrol platforms, including two small vessels recently bought by FIBA, and limited to inshore water patrols only. The missions are carried out in participatory manner, patrol parties generally consisting of officers of the harbour authority, customs, forestry and environment. Fisheries inspectors are normally not part of these operations. The objective of this effort is to curb illegal artisanal settlements and illegal fishing in a limited number of MPAs of the Biosphere Reserve. Results are good, but only shift pressure from one side of the atoll to the other – as illegal artisanal fishermen leave one area, to settle down next door. The resulting movements in 2004-2005 were from the southern island of *Orangozinho* to northern ones, creating higher incidence of illegal settlements and fishing on and around the islands of *Caravela* and *Caras*.

2.9.5.3 *Surveillance Operations Coordinating Unit (SOCU)*

SOCU is a decentralized service of the Permanent Secretariat of the CSRP. It is based in Banjul (Gambia), and is responsible for the fisheries MCS operations of the CSRP. The SOCU mandate is to work with national authorities, including FISCAP in Guinea Bissau, to augment the surveillance of the fishing zones of the Member States. The SOCU operates a programme of air patrols in the EEZs of Member States and provides real time information to national authorities for enforcement action where appropriate.

SOCU also participates in a programme of institutional strengthening of the national administrations, including training fishing inspectors, MCS officers (air and maritime), the crews of the patrol ships and aircraft, the national surveillance personnel and the national statisticians (agents of liaison/surveillance). Activities are supported by the Grand Duchy of Luxembourg, via Lux-development Projects AFR/013/LUX "Surveillance of industrial fishing in the CSRP Member States" and "Air surveillance of industrial fishing in West Africa". This has allowed the implementation of sea and air patrols of the fishery sector, and further EDF-funded support is programmed for 2006.

Although SOCU holds a database of detailed infractions records spanning a decade, CSRP internal procedures proscribe the sharing of these data between Member States. Information on contraventions is only disseminated to the state in which the offence occurred. Detailed analysis of SOCU data reveals that some specific vessels operating in the Guinea-Bissau fishery are systematic violators, and have been arrested up to a dozen times in other waters throughout the region for fisheries violations over the past 10 years. Without availability of consolidated regional vessel infraction statistics, regional infraction history for given vessels is untraceable at the time of issuing new licences. Persistent offenders can re-license with ease.

This is considered to be a fundamental malfunction in the way in which the Sub-regional Fisheries Commission operates, serving only to protect IUU fishing interests in the region and undermining most if not all of the benefits of a regional approach to MCS. This lack of sharing of data appears to undermine one of the fundamental objectives of the CSRP, and the consultants believe that CSRP should be required by its Member States and development partners to disseminate these data, and to advise its Members on how to use them in fisheries management.

2.9.6 *Fisheries Monitoring Control and Surveillance Activities*

2.9.6.1 *Vessel registration, certification, navigation license, and SAR*

The State of Guinea-Bissau runs a vessel register, and it is possible for vessels to enlist on Guinea-Bissau's register, and fly the Bissau-Guinean flag. The authority responsible for this activity is the *Direcção Geral da Marinha Mercante* (General Directorate of the Merchant Navy), based within the buildings of the *Capitanía do Porto* (Harbour Authority), in Bissau harbour. Registration is conditional on a seaworthiness survey, carried out by the ship surveyors of the harbour authority. Vessels are then issued a *licença de navegabilidade* (navigation licence) by the same authority before starting to operate in Guinea Bissau waters. This navigation licence applies to both artisanal and industrial vessels, and is accompanied by the issuance of a registration number. The Harbour Authority was however not able to produce a list of artisanal vessels that had applied and obtained a navigation licence, and the register is not effectively managed.

2.9.6.2 *Fishing licence procedures*

Fishing licences are issued by the Ministry of Fisheries. In practice, licence applicants petition the Minister directly. There are no exemptions for subsistence fishermen, therefore most fish illegally³¹. Licence procedures do not discriminate between small scale and industrial fishers. An FAO mission in

³¹ Furthermore the licence price for a national to operate an non-motorised canoe is unrealistically high at FCFA10,000/year.

2001 of artisanal fisheries recommended decriminalise the rightful activities of subsistence fishermen. Licence procedures for industrial fisheries do not present problems. Most foreign fishers employ agents to undertake this task.

2.9.6.3 Observer programme

Monitoring of fisheries activities is ideally achieved through a number of parallel programmes, which include VMS data, the collection of landing reports and catch declarations, logbook programmes, dockside monitoring programmes and observer programmes, as well as monitoring of trans-shipments and other transactions at sea by qualified Ministry of fisheries personnel.

Apart from an observer programme, no functional monitoring arrangements are in place. No VMS system exists. Data submission by operators is patchy at best, including data from EU operators. Analysis of these data seems futile, given the gaps. Hence the observer programme, operational for 20 years, is the only relevant source of fisheries data for Guinea-Bissau.

2.9.6.4 Fisheries surveillance means

FISCAP is located in separate premises from the Ministry of Fisheries. Office space is limited, but sufficient to run an effective MCS unit. The generator is not reliable, and long power cuts in this office are a daily occurrence. The offices would need minor rehabilitation in order to establish functional headquarters.

Currently, there are no decentralised MCS bases, and operational means are concentrated in Bissau, located some 60nm behind the baseline. This in itself creates a problem in response time, as sailing to the baseline in the central area takes about 3 hours. Rapid intervention is thus impossible. The pier where the vessels are located is in bad repair, and would need rehabilitation in order to guarantee the proper and safe mooring of the vessels. Currently vessels incur undue damage through improper mooring.

The Ministry of Fisheries currently owns 4 patrol vessels. These are the Portuguese-built sister ships Cacheu and Cacine, and the smaller Ilha de Caio, and 7 de Junho (a recreational fishing boat turned patrol boat). Table 40 summarises the specifications of these vessels. Cacheu and Cacine are the only vessels with (limited) deep-sea patrol capability.

Table 40 : Patrol vessels of the Ministry of Fisheries

	Cacheu	Cacine	Ilha de Caio	7 de Junho
LOA (m)	19.8	19.8	15.5	8
Beam (m)	5	5	4.3	
Hull	Fibre glass	Fibre glass	Aluminium	Fibre glass
Engines & HP	3 x 300	3 x 300	2 x 450	1 x 100
Crew	8-10	8-10	9	5
Armament	none	none	machinegun	none
Autonomy (in days)	4	4	2	1
Radar	Furuno GP 500	Furuno GP 500	Furuno 32nm	?
Radio	GPRS	GPRS	VHF marine & SSB	VHF marine
Echo sounder	yes	yes	yes	yes
Last mission	2002	Oct. 2004	Dec. 2004	2005
Condition	Not operational	Not operational	Not operational	operational

Except for the 7 de Junho, all vessels are in a state of disrepair. As of December, 2004, Guinea-Bissau has no functional fisheries surveillance patrol means left. Two additional patrol vessels are scheduled to be supplied under the target actions programme of the Fisheries Partnership Agreement. The Commission has retained the sum of € 1,402,951.50 from the support measures funding to allow the purchase of these vessels in 2005. In addition, the rehabilitation of the three larger vessels should be allowed for. Without these vessels the EEZ remains out of national surveillance reach.

A surveillance aircraft has been parked at the airport for many years now. It has allegedly flown very few or no fisheries surveillance missions. This plane could not be visited during the mission, but an assessment of its state, and the financial viability for rehabilitation should be assessed.

In terms of communications, the Ministry of Fisheries operates a marine VHF and SSB Barrett radio station, of which the latter has regional coverage capacity, capable of reaching Cape Verde islands and Mauritania. This radio station, bought under the AFR/013 MCS project, is located in the main building of the Ministry of Fisheries. This creates an operational impasse, as FISCAP is located in another building two blocks away. There is no working equipment for inspectors and observers. Observers embark wearing everyday clothing. They have only a handheld GPS unit, binoculars, and measuring board, and have no field guides. In addition, they are generally inadequately trained for the tasks they are required to perform.

At present therefore, the fisheries MCS means are limited to the SOCU capacity, and the limited observer coverage.

2.9.6.5 Operations

The only surveillance operations that have existed in Guinea-Bissau since 1985 are market inspections and at-sea inspections.

Market inspections were carried out between 5th August and 5th December, 1985 and never repeated, although the law does prohibit the marketing of undersize catches, and can be applied at this level.

In terms of at-sea operations, operations have been hampered from the start by inconsistent law enforcement objectives, limited funding, a flawed command structure and corruption. No single random routine inspection has ever been carried out at sea or in port. Some routine inspections have been carried out during at-sea inspections in collaboration with SOCU. Otherwise, all missions have been directed at intercepting vessels whose illegal activities had been disclosed through intelligence gathering. The activities have been wholly directed at generating revenues for the State, rather than achieving compliance with the regulatory framework for fisheries

No at-sea surveillance missions had been carried out by capable fisheries patrol vessels since late 2004, due to limited funds and to vessels being out of order. Dysfunctional coordination between the Navy and the Ministry of Fisheries has resulted in a complete breakdown of properly planned and well-managed surveillance operations. Most energy is spent on internal fighting. The last regional SOCU surveillance mission carried out jointly with Guinea-Bissau in August of 2004 (Operation Barracuda) rated the mission as *“the worst of all the sub-regional surveillance missions ever organised by SOCU since its creation”*, due to a lack of Guinea-Bissau’s organisational capacity and technical skills spanning the full spectrum of MCS operational aspects.

Currently attention of FISCAP is directed towards the artisanal fisheries sector, and scores of pirogues have been arrested in 2005, for fishing without a licence. These operations are carried out from hired fishing canoes, in a less than professional manner.

A brief analysis of the compliance levels of the different fleet segments based on SOCU data is presented in Annex 4. Until the end of 2004, infractions data were hardly considered at all in Guinea-Bissau for the renewal of licences. This changed in 2005, when the Ministry of Fisheries decided to refuse three licences on the basis of previous infraction history. No consolidated vessel infraction statistics have been published in the region. Hence, regional infraction history for given vessels is unavailable at the time of issuing new licences.

2.9.6.6 *Summary of problems and future developments*

The main obstacles in the Guinea Bissau MCS system can be summarised as follows:

- Lack of unified and functional command structure. Too many institutional players are involved in MCS, from operations, all the way to the administering of fines. Operational management is very weak, with no clear chain of command.
- The concentration of operational means in the capital, 60nm behind the baseline, prevents the effective deployment of operational means and generates undue operational costs;
- An autonomous financing mechanism for MCS does not exist, paralysing operations, and limiting operational planning and budgeting;
- Backlogs in salaries and weak training cause MCS services to be performed well below recognised professional standards;
- The lack of standard operating procedures, such as mission planning, mission execution and reporting mechanisms, encourages corruption and promotes poor programme execution;
- Information management at all levels of the Ministry of Fisheries cripple efficient MCS operations. Inspectors have repeatedly been sent on joint regional missions without updated national licensing information;
- Lack of proper penalty attribution standards, and intervention of too many high-level players in the setting and administration of penalties; including the existence of regular penalty cancellations on a seemingly random basis, with suspicion of corrupt practices
- The lack of an overarching long-term strategic development for MCS.

These deficiencies have been taken into account in the design of a short term and a long term MCS plan, including activities to support the strengthening of the capacity of the relevant institutions, as recommended in the report of mission “Strengthening Fisheries Monitoring Control and Surveillance and improving the fisheries legislation” supported by DG Fisheries in May 2005. Without the strengthening of institutional capacity and solving of some of the organisational problems (which will take high level political will) the improvement of means (such as supply of patrol vessels) is unlikely to result in improved surveillance and control.

2.9.7 *Scientific Framework for Stock Assessment*

2.9.7.1 *Scientific research strategy*

CIPA, the Centro de Investigação de Pesca, is the Directorate of the Ministry of the Fisheries responsible for fisheries research and for provision of management advice to the Government. However, due to the general weakness of the institution, there has been no clear enunciation of a scientific research strategy. There is no national fisheries research plan targeted on providing information for fisheries management decision making. Strategy has been modified by the different governments, according to political exigencies. Although CIPA’s role is defined, there is no clearly defined approach in the Fisheries Law setting out how scientific and technical advice should be submitted to and considered by Government. Within CIPA there is a discernible lack of conceptual and technical understanding about fisheries, and how natural resource management can or should be attempted. There is also a lack of adequate database software and specialised technical skills in statistics and data treatment. The loss of skills in the 1998-1999 conflict is only slowly being recovered and overall technical capabilities for effective fisheries management remains low.

The main activities undertaken are in relation to the observer programme and a number of research cruises.

Until now, data gathering from industrial fisheries has been mostly dependent on observers with low educational attainments and no capacity for scientific data collection. The implementation of research programme is substantially dependent on foreign support (scientists, scientific survey vessels and other resources) and has therefore reflected the research priorities rather than those directly aimed at meeting national needs.

2.9.7.2 Research cruises

Research cruises undertaken in recent years are:

- 1988 (April – May) - I Cruise of the vessel N/E «Noruega» (INIP from Portugal)
- 1989 (March – April) - II Cruise of the vessel N/E «Noruega» (INIP from Portugal)
- 1990 (April – June) - III Cruise of the vessel N/E «Noruega» (INIP from Portugal)
- 1991 (May – June) - IV Cruise of the vessel N/E «Noruega» (INIP from Portugal)
- 1995 (May – June) - V Cruise of the vessel N/E «Capricórnio» (INIP from Portugal)
- 2002 (October) – Cruise of the vessel B/O «Vizconde de Eza» (Spanish Institute of Oceanography)
- 2004 (June – July) - Cruise of the vessel N/O AL-AWAM (Institut Mauritanien de Recherches Océanographiques et des Pêches)

Between 1995 and 2004 there was a notable gap in research cruises, which significantly reduced the quality and validity of stock assessment analyses that can be undertaken

2.9.7.3 Observers

All of the information regarding the actual catch data from the industrial fishery in Guinea Bissau is derived from observer data. Comparison of observer data sets with other sources suggests that the observer programme typically records about 40% of the annual retained catch. It is noted that observers never report any by-catch or discards, although there is space provided in their forms for this information. As a result, there are no national data on by-catches and discards. Observers on board the vessels record transshipment events, but they are not required to record what is transhipped, which would be a useful cross check on catches. There is a suspicion that observer activity focuses on the foreign and EU flagged vessels, since these provide better wages and conditions on board.

It has been reported that observers must have their logs signed by the captain in order to get paid, which suggests that they are subject to pressures not to complete the forms correctly. Many observers supplement their income by working as crew, thus further compromising their independence and freedom from conflicts of interest. Clearly the observer program has potential to provide data of a higher quality and relevance to fisheries management. The upgrading of the observer corps is a much needed development outlined in the Draft National Surveillance plans proposed for Guinea Bissau.

2.9.7.4 Recommended fisheries research priorities

The consultants have made a crude estimate of stock condition for the purposes of this evaluation study. However, in the short-term, there is an urgent need to carry out a more thorough assessment of resources in order to make a preliminary, and up to date, estimate of MSY for each species or species group. This is quite a task, considering the number of species of commercial interest, but it should be given high research priority.

It is a generally necessity to undertake regular assessments of yield potential, as there may be considerable variation in abundance. This pertains to both pelagic and demersal resources, but most importantly in relation to Shrimp and Cephalopod resources. Some of these surveys, which are costly, may be carried out as part of a regional collaboration for stock assessment purposes.

The observer programme should be used for other research issues, as well as for statistical purposes. Priority issues which could be addressed by data from an improved observer programme are:

- Improved knowledge on species composition of catch, by-catch and discards;
- Biological sampling to study growth and reproduction;
- Length frequency sampling to study selectivity and possibly population structure;
- Estimates of discarding and its effect on juveniles;
- Delimit fishing grounds for specific species targets and thus improve estimates of specific effort;

These types of data, including the detailed information on the catches and discards of the industrial fleet, would be very useful for determining yield potentials for many commercial species even in the lack of regular surveys.

Some complex issues such as the problem of discarding and its possible effects on non-commercial species have emerged during this study, and would deserve further investigation. Another complex issue is the difficulties in assessing tropical multi-species fisheries and the importance of considering trophic relationships. This is expected to be of particular importance in the shrimp fishery, as fish predate heavily on shrimp. Thus, the recovery time of the shrimp stocks depends also on the abundance of their predators and not only the fishery. In Guinea Bissau, some of the first steps in trophic modelling have been taken, but there are still major steps to be taken.

2.10 ENVIRONMENTAL CONSIDERATIONS

2.10.1 *Coastal and marine habitats*

Much of the coastline is made up of mangroves, with an estimated coverage of 3,176 square kilometres and six species of mangrove trees recorded. The coastal zones are of great importance as nursery grounds for large numbers of commercially important species (mainly shrimp and fish), and as over-wintering grounds to very large bird populations, the second-most important such grounds in the region, after the Banc d'Arguin in Mauritania.

2.10.2 *Direct interactions*

Direct environmental impacts of the fishery relate to the high rates of by-catch and discards, and incidental catches of marine mammals, seabirds and turtles. The main issues are considered in the following paragraphs:

2.10.3 *By-catch and discards*

As mentioned earlier, the Chinese shrimp and cephalopod trawlers appear to target demersal fish resources, using smaller mesh size shrimp and cephalopod nets. In consequence, their by-catch levels generally exceed 95% of the total catch, and are made up of demersal fish. A large part of that "by-catch" is kept as non-target catch. The damaging factor of this practice resides in the fact that the small mesh sizes used for targeting fish lead to recruitment over-fishing of commercially important demersal fish species. This contributes to potential stock exhaustion in the long term.

Table 41 summarises discard rates from studies conducted in the West African region (from the Strait of Gibraltar to the south-western tip of Guinea Bissau's EEZ), and suggests that comparable rates should apply in the Guinea-Bissau situation.

Table 41 : Discard levels recorded in West African industrial fisheries

	Fishery	FAO Stat Sector	Period	Mean disc. rate	Most prominent discarded groups and species (as % of by-catch)
Spanish freezer trawler	Saharan Cephalopod	34.1.1 34.1.3	1976 - 1977	61.8%	Invertebrates (25.9%), <i>Sardina pilchardus</i> (4.8%) <i>Trachinus draco</i> (2.1%), <i>Diplodus senegalensis</i> (1.8%) <i>Trachurus spp.</i> (1.6%), <i>Pagellus erythrinus</i> (1.5%)
Senegalese bottom trawler	unspecified	34.1.3 34.3.1	1979 - 1981	67.5%	<i>Pagrus pagrus</i> (14%), <i>Balistes spp.</i> (13.1%), <i>Brachydeuterus auritus</i> (11.5%)
Senegalese bottom trawler	Shrimp fishery	34.1.3 34.3.1	1985 - 1986	60.8%	<i>Brachydeuterus auritus</i> (22.3%) <i>Pteromylaeus bovinus</i> (4.4%) <i>Ilisha africana</i> (3.5%)
Spanish freezer trawler	Mauritanian shrimp fishery	34.3.11 34.1.32 shallow	1985 - 1986	85.9%	Invertebrates (24.3%), <i>Dicologlossa cuneata</i> (11.4%), <i>Sardinella aurita</i> (7.6%), <i>Arius mercatoris</i> (7.3%)
Spanish freezer trawler	Mauritanian shrimp fishery	34.3.11 34.1.32 deep	1985 - 1986	70.5%	<i>Chlorophthalmus atlanticus</i> (18%), <i>Helicolenus dactylopterus</i> (8.4%), other crustaceans (8.4%), <i>Munida spp.</i> (8.3%)
All fleets	Shrimp and cephalopod trawl fishery	34.3.1	1989 - 1991	58,630 tonnes	<i>Haemulidae</i> (36.7%), <i>Clupeidae</i> (6.5%), <i>Carangidae</i> (5.8%), <i>Sciaenidae</i> (4.8%), <i>Ariidae</i> (4.4%), other crustaceans (4%)

Sources: Amorim, P., Duarte, G., Guerra, M., Morato, T., and Stobberup, K.A. (2004). Preliminary Ecopath Model of the Guinea Bissau continental shelf ecosystem. Modèle Ecopath du plateau continental de la Guinée-Bissau. In: M.L. Palomares and D. Pauly (eds), "West African Marine Ecosystems: models and fisheries impacts"; Univ. British Columbia, Fisheries Centre Research Reports 12(7): 95-112.

It can be seen from these studies that discards in the targeted shrimp and cephalopod fishery are consistently above 60%, rising to over 85% in the case of shallow water shrimp operations. The most recent study, which ran from 1989 to 1991, was carried out in the Guinea-Bissau sector. It estimates total by-catch in terms of total tonnage (58,630 tonnes over a two-year period), and identifies the predominant species as sweetlips (*Haemulidae*), the sea catfishes (*Ariidae*), the croakers and drums (*Sciaenidae*), the herrings (*Clupeidae*) and the jacks (*Carangidae*). All of these are food fishes, and targets of demersal fish trawls and small scale fisheries.

On the basis of this historic evidence for the region, an overall conservative estimated discard ratio in the shrimp and cephalopod trawling fleets can be confidently set at 0.65. This ratio integrates possible lower discard rates for the Chinese fleet, and expected higher discard rates for shrimp and cephalopod fleets taking place in shallow waters. Official catch statistics for shrimp and cephalopod fleets would thus only represent 35% of the actual overall catch realised.

Table 42 shows the declared catches of the different fleet segments, broken down by category of licence (shrimp, fish and cephalopod) and by catch (shrimp, fish and cephalopod). The data shows that several fleet segments have not complied with the specified limits for retention of by-catch on board. Of the EU vessels (some of which are known to have been fishing under arrangements other than the EU-Guinea Bissau protocol), only the Spanish vessels appear to have complied with by-catch limits in general, while the Portuguese vessels have complied only in respect of the shrimp fishery. Portuguese vessels with cephalopod licences (not fishing under the Protocol) and Italian vessels (fishing under both the Protocol and/or the FEDERPESCA agreement) appear not to comply with by-catch limits. By comparison, the catch composition of Guinean flagged vessels appears to be suspiciously compliant, and at variance with the catches declared by the foreign vessels. In all cases, it is evident that by-catch rates are very high, and whether it is retained on board or discarded, the resource impact is the same. Without effective fisheries MCS to ensure that vessels do not target species for which they are not licensed, the by-catch limits have only minimal impact on environmental or fisheries resources.

Table 42 : Catch composition by flag of major fleets and type of fishing license, 2000 & 2001. Shading indicates that by-catch limits have been exceeded ³².

Country	Year	Cephalopod Trawl Licenses				Fish Trawl Licenses				Shrimp Trawl Licenses				Total
		Cephalopod %	Crustacean %	Fish %	Catch (t)	Cephalopod %	Crustacean %	Fish %	Catch (t)	Cephalopod %	Crustacean %	Fish %	Catch (t)	Catch (t)
China	2000	22	1	77	3,618	19	0	80	1,816	18	5	77	3,193	8,627
	2001	18	1	81	4,879	6	1	93	891	8	7	85	4,937	10,707
Guinea Bissau	2000	0	2	98	46	0	0	100	1,481	0	97	3	653	2,180
	2001	0	1	99	56	0	0	100	1,554	0	96	4	1,225	2,835
Italy	2000	40	17	42	268	40	9	52	55	32	10	59	692	1,014
	2001	25	27	48	0.5					31	17	52	1,508	1,508
Portugal	2000	8	49	42	21					9	71	20	472	493
	2001	20	67	13	66	19	59	22	53	13	67	19	441	561
Senegal	2000	0	0	100	458	27	1	72	26	10	10	80	615	1,098
	2001	34	10	56	8	38	10	53	22	32	13	55	1,067	1,096
Spain	2000	18	0	82	1,150	6	4	90	297	7	61	32	1,242	2,689
	2001	7	0	93	60	13	0	87	54	3	67	30	1,069	1,183

Source: CIPA Observer Data

³² Fish Trawlers: crustaceans and cephalopods may not account for more than 9% each of total catch.

Cephalopod Trawlers: crustaceans may not account for more than 9% of total catch.

Shrimp Trawlers: fish and cephalopods may not account for more than 50% of total catch.

2.10.4 *Incidental catch of Marine mammals*

By-catches of marine mammals can be relatively frequent in purse-seine fisheries targeting skipjack and yellowfin. For example, I-ATTC quotes that in 2001 2,075 marine mammals were caught (along with 137 sea turtles and 35,123 sharks and rays) in purse seine gear in the Eastern Pacific Ocean. However, in contrast to the Pacific, and the western side of the Atlantic Ocean, there is little literature regarding cetacean by-catch in the Eastern Central Tropical Ocean. However incidence is thought to be less. For this reason ICCAT does not publish quantitative estimates of mammal by-catch and the consultants are not aware of any studies in this region. Furthermore drift nets and pelagic trawls feature as the predominant gears involved in marine mammal by-catches. These two types of fishing gear are deployed to only limited extent in Guinea-Bissau's industrial fisheries and there appears to be little threat posed.

The targeting or retention on board of dolphins within the Marine Protected Areas is prohibited by the Plan de Gestão das Pescas 2005 and by the Fisheries Law. Fishers catching these species are obliged to return the animals to the water alive, and to report the catch to the competent authorities. There is a clear need to extend these requirements to all of the national fisheries.

The Ilhéu do Poilão is also home to one of the largest West African Manatee (*Trichechus senegalensis*) populations in West Africa. Although the populations of this species have declined due to targeted hunting in the past, no specific fisheries interactions are reported.

2.10.5 *Incidental catch of Seabirds*

Very little is known about incidental mortality of seabirds currently caused by pelagic longlining in the Atlantic Ocean and Mediterranean Sea. ICCAT has established a Sub-Committee on By-Catch and a Shark Working Group but apparently does not collect data on mortality of seabirds. Some authors do consider long-line fishing in some regions to be a threat to 22 species of seabirds that are currently listed as globally 'threatened' according to IUCN criteria (Bird Life International 2000). These seabirds have been recorded as incidental by-catch in 28 fisheries from 14 different nations, but not including any fisheries as far north as Guinea Bissau or neighbouring countries. Furthermore surface long-lines feature as the predominant gears involved in seabird by-catches. This type of fishing gear is only minimally deployed in Guinea-Bissau's industrial fisheries and there appears to be little threat posed. The impact of surface long-liners on the sustainability of these species of seabird populations is therefore not considered to be significant in the Guinea Bissau region.

In terms of bird life, the Bolama-Bijagós Biosphere Reserve has been identified as the second most important over-wintering site for palearctic and resident wader populations (marine birds) in West Africa, following closely the more northern and larger site of the Banc d'Arguin, in Mauritania. Over a million of these birds migrate into the Reserve during the northern winter months, and find shelter and food on the extensive mudflats and in the mangrove stands of the Reserve. Other important and biologically diverse sites include the Rio Cacheu National Park, the Rio Grande de Buba, Rio Mansoa and Rio Tombali Basins. Bird species found in these locations include Marabou Stork, Pink-backed Pelicans, African Darters, Sacred Ibis, African Spoonbill, Flamingos, etc. There are no direct fisheries interactions which impact on these species.

2.10.6 *Incidental catch of marine turtles*

The main species of sea turtles found in the Eastern Central Atlantic Ocean, all present in Guinea Bissau waters and four of which present nesting sites, are as follows:

- Green Turtle (*Chelonia mydas*) - **Endangered**³³
- Hawksbill Turtle (*Eretmochelys imbricata*) - **Critically Endangered**
- Olive Ridley (*Lepidochelys olivacea*) - **Endangered**
- Loggerhead Turtle (*Caretta caretta*) – not nesting in Guinea Bissau - **Endangered**
- Leatherback Turtle (*Dermochelys coriacea*) - **Critically Endangered**

These turtles are all endangered species according to 2003 IUCN Red List of Threatened Species. Guinea Bissau (Poilão Island) is the most important green turtle breeding site in the West Africa and one of the most important in the Atlantic. The largest identified nesting site for green turtles (*Chelonia mydas*) in West and Central Africa is situated on Poilão island.

Marine turtles present as by-catch in trawl and surface long-line fisheries in Guinea Bissau waters. Although longlining operations in Guinea Bissau are rather limited, turtle by-catches in shallow water trawl operations are reported. Recent estimates indicate that around 300 sea turtles would have been accidentally caught by industrial trawlers in 1997, of which approximately 10% might have died before being released back to sea³⁴. There are no regulations providing for the mandatory fitting and use of turtle exclusion devices (TEDs). However it does appear that most of the turtles caught accidentally are returned live to the sea. Moreover, the observer programme has a relatively high coverage of trawl fishing activities (around 80%), which is also an important incentive to release turtle by-catch alive. Turtles are also commonly caught in purse seine operations, but evidence world-wide suggests, that these are usually returned live to the sea.

The targeting or retention on board of turtles within the Marine Protected Areas is prohibited by the Plan de Gestão das Pescas 2005 and the Fisheries Law. Fishers catching these species are obliged to return the animals to the water alive, and report the catch to the competent authorities. There is a clear need to extend these requirements to all of the national fisheries.

Within the African regions, the Abidjan Turtle Conservation Convention was established in 1999 through a Memorandum of Understanding under the Convention on the Conservation of Migratory Species of Wild Animals. Signatories include Guinea Bissau. Although Canary Islands (Spain) and Azores and Madeira (Portugal) are included within the invited range of states, neither have signed nor ratified the Convention. A first meeting was held in Nairobi in 2002. This meeting established a regional conservation plan for sea turtles meant to apply to all the countries ranging from the Straits of Gibraltar to the Cape of Good-Hope. Under the Convention each country should present measures for the conservation and protection of turtles at all stages of their life cycle. Sea turtle conservation initiatives are underway in other Convention countries, including Morocco, Mauritania, Democratic Republic of the Congo, Angola and Namibia. However, the level of implementation within the African region is known to be weak.

The continued decline in numbers of critically endangered sea turtle species, suggests that there is serious risk of local extinction for some populations. The breeding concentrations of the Green turtle are particularly at risk in Guinea Bissau. This warrants the application of the precautionary principle as applied to endangered species management, suggesting that it is justifiable to apply measures to reduce or eliminate this significant source of turtle mortality. Additional monitoring in Guinea Bissau is required in this respect, as is work to assess the potential benefits of turtle exclusion devices or other measures.

³³ Note that : a taxon is “critically endangered” when it is facing an extremely high risk of extinction in the wild, as defined by reduction of at least 80% over the last 10 years (or three generations). A taxon is “endangered” when it is not critically endangered but is facing a very high risk of extinction in the wild, as defined by reduction of at least 50% over the last 10 years (or three generations).

³⁴ Based on interviews of observers (Broderick and Catry 1998).

2.10.7 Unsustainable cutting of mangroves for fish processing

Mangroves are a characteristic forest biotope in tropical river estuaries and tidal zones. The mangroves of Guinea Bissau comprise 6 species, of which *Avicennia germinans*, *Rhizophora mangle*, *Rhizophora racemosa* and *Rhizophora harrisonii* are the most common. They provide fuel wood for cooking, and for smoke-drying of much of the artisanal catch of fisheries. The mangrove resources extend to an area estimated at 3167 km². It is thought that over 20% of the national cover has disappeared over the last 20 or 30 years, but there are no reliable data available. Uncontrolled harvesting of mangrove stands leads to inland intrusion of salt water, loss of reproductive and juvenile habitats of marine species, and has already led to the documented erosion and complete disappearance of at least one island in the atoll. Any significant development of artisanal fish landings without new processing infrastructure could have major environmental impacts.

In addition a recent WWF study³⁵ identified Guinea-Bissau a highly susceptible to species loss from predicted decreases in the area of habitats available, mainly due to clearing of mangroves. These habitats are also threatened by global warming and sea level changes. Amongst species at risk, the mangrove zone provides habitat for the Atlantic hump-backed dolphin, one of the lesser known small cetaceans. *Sousa* sp. is listed in Appendix I&II of CITES. The species is categorized as "Data Deficient" by the IUCN.

2.10.8 Ecosystem Impacts

Bottom trawling is prevalent, and much of it with fine mesh. High by-catch rates are reported. Discard rates (the part of the by-catch that is discarded) are known to be high, particularly in shrimp fisheries. There are no estimates for Guinea Bissau, but an estimated 80-95% of the total catch is discarded in the shrimp fishery, based on estimates from Senegal and Mauritania³⁶. For cephalopod/fish trawlers, an estimate of 40% discarded was used for the Biomass Estimates in section 2.2.4.1, but this is most probably a conservative estimate³⁷. Particularly in the case of EU vessels, discarding may be higher as there are only a few species that are considered of commercial interest, and the vessels are generally compliant with the limits for retained by-catch. Impacts of discarding on the demersal benthos have not been studied in Guinea Bissau, but are likely to be substantial as in the most trawled regions. Until now, no specific effects have been attributed to these indirect impacts. The increasing dominance of scavenger species (mostly of low value, such as *Ballistes* spp) reported in some years have been attributed mainly to environmental changes (salinity and temperature) rather than discarding³⁸, but trawl fisheries impacts cannot be entirely excluded.

2.10.9 Measures to limit environmental impact of fisheries

Except for limited circumstances, Fisheries Law does not address environmental impacts on non target species. Targeted fishing and retentions on board of accidental catches of dolphins and turtles are prohibited by the Fisheries Law. The "Plano de Gestão das Pescas", issued by Joint Decree of the Minister of Fisheries and the Minister of Finance, prohibits the capture of turtles, manatees, dolphins, crocodiles, and cartilaginous fish (sharks and rays) in the marine protected areas, and requires that specimens which are caught be returned live to their environment. Some mesh size limitations are also introduced in these zones. There is a clear need to extend some of these environmental measures to national fisheries, an issue to be addressed in the current review of the legal system.

³⁵ *Global Warming and Terrestrial Biodiversity Decline*, JR Malcom, WWF, 2000

³⁶ Alverson et al. 1996; Sobrino and García 1997

³⁷ Spanish trawlers targeting fish in Mauritania have discard rates of about 50% (Balguerías et al. 2000).

³⁸ Hall 1999

However, protection of the marine environment is one of the more prominent components of the environmental management process in Guinea Bissau. The 1997 framework law for protected areas formalises the designation of protected areas and management processes.

In 1996, UNESCO declared the Bolama-Bijagós island complex a Biosphere Reserve. The atoll can be described as an accreted sandy complex of islands and channels, covered in lush tropical vegetation, and whose highest point only reaches 9 meters above the high water mark. This reserve today harbours a number of marine protected areas and no fishing zones, such as Orangozinho and João Vieira Poilão, in an effort to provide protection for sites of outstanding ecological value, harbouring a wealth of rare and protected species, some of which are almost exclusively confined to this part of the world. The 1997 framework law for protected areas formalises the designation of protected areas and management processes.

Since then the efforts and collaboration of international and national NGOs, such as IUCN, FIBA and Tiniguena, have led to the identification and designation of a range of protected areas. These efforts, backed by donor funding, date back to the 1980's, and have recently resulted in the government creating the Instituto da Biodiversidade e das Áreas Protegidas (IBAP) under the Ministry of the Environment, a clear sign of the government's recognition and willingness to protect and preserve the national natural heritage.

2.11 INTERNATIONAL ASPECTS OF FISHERIES POLICY

With regard to international conventions, Guinea Bissau ratified in 1986 the United Nations Convention on the Law of the Sea (UNCLOS), but has not signed, or ratified, the Agreement relating to the implementation of Part XI of the Convention, nor the Agreement for the conservation and management of straddling and highly migratory fish stocks.

It is also a member of the Conference of the Ministers Responsible for Fisheries in the Portuguese Speaking Countries established in September 1995.

At the regional level Guinea Bissau is a Party to the Convention on Fisheries Cooperation among African States Bordering the Atlantic Ocean as well as being a member of the Committee for the Eastern Central Atlantic Fisheries (CECAF) and of the Intergovernmental Organisation for Marketing Information and Cooperation Services for Fishery Products in Africa (INFOPECHE).

Guinea Bissau has ratified the Convention for the Establishment of a Sub-Regional Commission on Fisheries and is a member of the Sub-Regional Commission on Fisheries (SRCF). The CSRP was formed on 29 March 1985 and there are six member states Cape Verde, Gambia, Guinea, Guinea Bissau, Mauritania and Senegal. The Convention provides a regional framework for regulating fishing activity within the waters of Member States, and for regional cooperation in the exercise of fisheries monitoring control and surveillance activity (including hot pursuit) through the organ of the Surveillance Operations Coordinating Unit (SOCU). This is a decentralized service of the Permanent Secretariat of the CSRP. It is based in Banjul (Gambia), and is responsible for the fisheries MCS operations of the CSRP. The SOCU mandate is to work with national authorities:

- To ensure air surveillance of the fishing zones of the Member States;
- To organize joint operations of marine air surveillance;
- To prepare regional programmes of mobilization of external resources, including assistance for the implementation of the fishing protocols;
- To contribute to the harmonization of the legislations and to enforce respect of the agreements signed as regards MCS requirements;
- To organize technical meetings, workshops and training seminars;

- To reinforce the capacities of coordination and planning of the Secretariat of the CSRP;
- To train regional fishing inspectors, MCS officers (air and maritime), crews of the patrol ships and aircraft, the national surveillance personnel and the national statisticians (agents of liaison/surveillance);
- To prepare national MCS plans, and to optimize the use of surveillance means;
- To develop a sub regional register of the fishing vessels (generating incomes) used as a base of information and MCS instrument.

The strengthening of SOCU has been supported by the Grand Duchy of Luxembourg, via Lux-development Projects AFR/013/LUX "Surveillance of industrial fishing in the CSRP Member States" and "Air surveillance of industrial fishing in West Africa". This has allowed the implementation of sea and air patrols of the fishery sector, to the benefit of Guinea Bissau and other member states.

Under the 1993 co-operation agreement, Guinea Bissau and Senegal established, in 1995, a bilateral Agency of Management and Cooperation, creating common rules for research, access to resources and sanctions in case of offence.

Guinea Bissau is not a member of ICCAT, and is not a party to the Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas (FAO Compliance Agreement), which came into force in April 2003.

Government policy as expressed in the Programme of Government 2004, is to harmonise the fisheries legal framework with international and regional principles and standards. A mission by a Legal Expert under the Specific Convention No.13 "Technical Assistance to the Guinea Bissau Ministry of Fisheries in relation to strengthening Fisheries Monitoring Control and Surveillance and improving the fisheries legislation", has recommended the ratification of the following international agreements:

- Agreement for the Implementation of the Provisions of the UNCLOS relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks (United Nations Fish Stocks Agreement - UNFSA);
- Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas (FAO Compliance Agreement).

These instruments, along with the FAO Code of Conduct, establish a legal framework for the development and enforcement of the UNCLOS, providing for very specific obligations and measures of compliance.

The two agreements are closely related in scope, since the FAO Compliance Agreement applies to all the vessels that are used for fishing on the high seas, and the UNFSA applies to the conservation and management of fish stocks in the EEZ and in areas beyond national jurisdiction. Both the agreements provide for cooperation in the management of such fish stocks.

2.11.1 Donor activity in the fishery sector

2.11.1.1 World Bank/GEF Coastal and Biodiversity Management Project

The Coastal and Biodiversity Management Project (CBMP), as it is known, has an overall cost of US\$11 million, over a five-year period, and is being funded by a US\$4.8 million grant from the Global Environment Facility (GEF), approved by the GEF Council in May 2003; and a US\$3.0 million credit* from the International Development Association (IDA), as well as additional donor co-financing.

The project has assisted the Government (late 2004) in the creation of a new institution, the Institute for Biodiversity and Protected Areas (IBAP), to manage a network of five large protected areas in the coastal zone. To back up this institution's efforts, the project will fund community development activities in and around the protected areas, through a micro-finance mechanism. The project will also promote collaboration between Government and communities in the water and land sectors, by establishing two reserved fishing zones in the shallow waters of the archipelago that would be largely managed by the communities using these zones.

As part of this effort, the project will also help strengthen the Government's capacity to support the management of these reserved fishing zones and the surrounding fishing areas, as well as to assess the environmental impacts of large projects such as petroleum development. Inputs will include the financing of MCS means including:

- Establishing a VMS system
- Establishing Surveillance bases on the coast/islands
- Provision of two patrol vessels both under 12m length

2.11.1.2 Fisheries Sector Support Project (PASP)

The PASP (Apoio ao Sector das Pescas) Project is supported by the African Development Bank and is endowed with a financial envelope of US\$ 9.69 million. The PASP project is a generic fisheries sector project, providing broad-based support for the development of the sector as a whole. Financing is part ADB Loan finance, partly IFAD grant. The project contains important MCS components that need to be aligned in order to guarantee a consistent and effective approach to MCS system development in Guinea-Bissau. A technical assistance component of the project was launched in May 2005, which will provide a team of international experts to assist the General Directorate of Fisheries in the following main components:

- project management.
- training (mainly institutional/governmental staff);
- private sector support (credit)
- research of fishery resources;
- MCS implementation;
- port infrastructures;

The first intervention phase it has identified is the construction of the fishing harbour of Bandim, where the semi-industrial project (Chinese funded) is located. This phase will also include the acquisition of 3 vessels for MCS purposes of industrial fisheries.

The project design appears to have neither recognised nor addressed the major institutional barriers to the development of the fishery sector, principally in terms of the weak and contradictory policy framework and the lack of access to international markets as a precondition for private sector investment.

2.11.1.3 Advanced Artisanal Fishery Development Project

This project (PRODEPA - Projecto de Desenvolvimento da Pesca Artesanal Avançada) was approved and launched in 1994, funded by ADB using ADF credit funds. Only around 81% of the project had been completed when the funding was withdrawn because of the armed conflict of 1998. A balance of US\$408,000 funding is still to be disbursed and the Ministry of Fisheries expects to recommence activities in 2005. The project is centred on support to artisanal fisheries, mainly through training and micro-credit schemes for equipment. It has accomplished the following components:

- training infrastructure in Bolama;

- training of young fishermen, mechanics,
- support for fishermen's activities;
- infrastructure support for fisheries (including ice plant, transport canoe, vessel construction, commercialisation, etc.);

2.11.1.4 Support to the Commission Sous-Regional de Pêche

The CSRP Member States benefited from the AFR/ 013/ LUX Project financed by the Grand Duchy of Luxembourg (value US\$5.3 million plus US\$0.5 million from the CSRP Member States over the period 1999- 2003). The activities implemented under the project comprised:

- an institutional strengthening element (implemented by FAO and based within the CSRP Permanent Secretariat)
- an operational part carried out by the Coordination Unit for Surveillance Operations (UCOS) based in Banjul (Republic of Gambia)

The main outputs were the development of a regional fisheries MCS coordination capacity and the implementation of 14 combined air- sea fishing surveillance missions, and identification and quantification of IUU fishing.

The European Union, through the 9th EDF regional funding programme, has decided to continue the support to the CSRP in the “*Strengthening of capacity in the area of fisheries monitoring control and surveillance*”. Whilst the programme has not yet been finalized, a level of support of the order of €5 million over a period of 4 years, commencing in 2006, is foreseen. The project will strengthen the national MCS base, improve information systems, support implementation of coordinated MCS programmes, improve human resource capacity for MCS, and ensure that MCS is integrated within national fisheries policy frameworks of the member states. The project is expected to support 40 MCS missions in the Member States EEZs.

In addition, the 9th EDF is also projected to support the programme “Support for the Management of Fisheries in West Africa” (AGPAO), with the global objective of promoting the contribution of the fishery sector to the economies of the CSRP member states. Through the medium of the CSRP, the project will assist the Member States to strengthen and coordinate their fisheries policy framework, in relation to fisheries management.

2.11.1.5 GEF Strategic Partnership Investment Fund

The GEF is supporting a “Strategic Partnership for a Sustainable Fisheries Investment Fund in the Large Marine Ecosystems of Sub-Saharan Africa”. The Implementation is by IBRD of the World Bank, in collaboration with FAO and the WWF. The initiative is seeded by a GEF Grant of US\$60 million, and will deploy co-financing of US\$205 million, phased in tranches over a 10 year period. The objective is to assist the coastal countries in the region to meet the targets for sustainable fisheries set by the World Summit on Sustainable Development held in Johannesburg, South Africa in September 2002.

The World Bank is responsible for the preparation of the country-level investments for sustainable management of marine fisheries and their habitat. Once potential projects have been identified in a country, the World Bank and other donors would co-finance the project with the GEF (which would use the Sustainable Fisheries Investment Fund) at a ratio of 3 to 1. The World Bank may finance country-level investments in institutional strengthening and restructuring (using technical assistance loans), alternative income opportunities and community development in rural fishing communities and monitoring, control and surveillance activities (through specific investment loans), while the GEF-led Sustainable Investment Fund finances the implementation of small-scale fisheries management systems and networks of effectively managed marine/coastal protected areas.

The World Bank also foresees the development of a multi-donor Global Forum and Trust Fund for Sustainable Fisheries, which would evolve from the current Trust Fund for Sustainable Fisheries funded by the Government of Japan. FAO would provide the technical expertise in the preparation of the policy sector notes and the country-level adjustment or investment operations. In these it would be guided by the agreed upon principles for sustainable fisheries management as provided in the Code of Conduct and in UNCLOS. WWF would provide the technical and operational expertise to prepare and implement the

proposal preparation process; to foster the development of coastal and marine protected area networks; to utilize its existing network with stakeholders in countries throughout the region, (including the governments, non-governmental organizations, research institutions, and others), so as to ensure effective stakeholder participation and implement country-level activities, within the possibilities of the Bank's procurement rules.

A diagnostic mission to Guinea Bissau was conducted in 2003³⁹, and proposals for a programme of support are in the process of being developed. More details of this project are available at <http://www.gefonline.org/projectDetails.cfm?projID=2093>

2.11.1.6 Artisanal fishery development projects

The development of the artisanal fishery has received much donor attention over the years, since it appears to offer a simple one-stop solution to food security and economic development. Table 43 lists some of the main projects undertaken. Almost all have failed due to a variety of reasons, the most important ones being lack of an appropriate policy framework for development (notably price controls), and lack of stable investment climate for the small scale fishers and traders. There is no evidence of any sustainable outputs from any of these projects.

³⁹ "Republic of Guinea Bissau, Diagnosis and emergency restructuring plan to enhance the domestic benefits of the fishing sector and its integration in the world economy", WORKING DOCUMENT - Joint FAO/World Bank Fisheries Sector Memorandum, G. van Santen et al, "Assistance to the Fisheries Sectors in West Africa (Mauritania, Senegal, the Gambia, Guinea-Bissau and Guinea)", Washington/Dakar, June 29, 2003

Table 43 : Artisanal development projects

Project name	Donor	Description
PESAC (Catio)	Misereor (a German NGO)	1985 to 1991 objective was to create a credit association to supply fishing materials and services and offer organizational assistance. It had one ice machine, a generator, a carpentry and a mechanic workshop.
ADB Fishing Centre	ABD	Five-year project funded by an African Development Bank loan of 15.3 million US\$. Its main objective was to develop artisanal fisheries and semi-industrial fisheries along the entire coastal region of Guinea-Bissau, with the main intervention site at Cacine. Currently suspended.
Development of Artisanal Fisheries in the Biombo peninsula	UNDP/ FAO	1987 to 1992. Objectives were boat building, training, processing and commercialization, including the creation of a fishing centre and fishing cooperatives. Built two experimental fishing boats, trained two teams in using new fishing techniques and involved local women in processing and marketing. Since the project had to work through PESCARTE fishers had to sell at official prices.
Cacheu Fishing Center (Pescarte)	USAID followed by EEC and Portugal	1980-86 constructed one cold storage room, two ice machines, mechanical workshop, two generators, one fishing gear sales store and two fuel reservoirs. Fibreglass pirogues and out-board engines were used for short-term training courses for young fishermen.
Pescarte/ASDI centre (Bubaque)	Swedish International Development Agency (SIDA)	1977- 1980 operated by PESCARTE. It included two ice machines, two cold storage rooms, three generators, a mechanic workshop, a store for the sale of fishing gear and two boats. Its activities included the training of fishermen, the creation of a fishermen's association, experimental boat building, the construction of canoes, the commercialisation of fish and the sale of subsidized fishing equipment on a credit system.
Bolama	Italian Aid	US\$6 million. Installed ice machines, cold storage room, a general store and carpentry and mechanic workshops, reparation of the Bolama fish landing, training of fishermen, training in processing and marketing of fish, the sales of fish equipment and the construction of a social centre. According to a FAO report, "few results as far as developing activities in the Bolama area".
Bolama	Belgian NGO « Les îles de paix ».	1986 to 1994, working directly with target groups, developed mechanical and carpentry workshops, supplied a transportation vessel for transport to Bissau and other urban markets where they were sold by the project. Training and credit inputs

2.12 STAKEHOLDERS

2.12.1 Guinea Bissau Stakeholders

2.12.1.1 Income and employment in fisheries

2.12.1.1.1 Vessel construction and repairs

A very small group of people have are active in vessel construction and repairs, which is almost 100% related to artisanal fisheries and the Chinese supported Semi-industrial Fishery Project. There is no interaction whatsoever with the EU fleet. Incomes are estimated to be around 30€ to 120€/month.

2.12.1.1.2 Small scale fishing

In Guinea Bissau, artisanal fisheries have traditionally been, and remain, very limited as a source of employment and income. Guinea Bissau including the Bijagos islands, is a largely agrarian society. Artisanal fishing is pursued for subsistence purposes with the balance sold for distribution. Subsistence fishing is more likely in small and remote communities lacking distribution and commercial systems. It is also common for small-scale farmers to undertake subsistence fishing to supplement the family diet. CIPA estimated in 2001, that only 4000 part-time fishers of Guinea Bissau origin are active in the country, although, this figure does not include riverine fisheries. However, much larger numbers of marine fishers operate within the GB EEZ. These are of various origins, but are predominantly Senegalese. Their numbers are difficult to determine, but could be as high as 7000.

2.12.1.1.3 Incomes and employment in industrial fishing

Approximately 340 Guinea Bissau fishers work in the industrial fisheries (including the national charter vessels), with 32% of them in the EC fleet. Earnings are between US\$300 and 500/month. Industrial fleets also pay social security and insurance averaging €135/month.

The semi-industrial project with their fleet of 3 trawlers employ 54 men as crew members with an average wage between 225€ to 525€. The trawlers are also operated with Chinese personnel (in total 12). This project also includes 128 employees onshore, working with the cold storage, ice plant and fleet maintenance, although the latter is mainly undertaken by Chinese technical assistance. The average salary of 90 qualified staff is €120.

A corps of 200 Observers is employed, although only around 100/year actually go to sea. Wages are €300/month when at sea with an additional informal bonus for working as crew members of around €400. Wage onshore is around €112. Observer duties are regarded primarily as a source of income.

2.12.1.1.4 Incomes and employment in fish processing and marketing

Downstream activities include fresh fish selling, managed mostly by women. An estimated 7380 persons are employed in processing and distribution. This activity is linked with landings of all national fishing activities (artisanal, and semi-industrial). Most fish is smoke-dried in artisanal fish smoking centres located close to landing sites. Around the semi-industrial project in Bissau about 150 to 200 women vendors operate from industrial landings and also some artisanal landings.

2.12.1.1.5 Employment dependency

Employment and dependency of the Guinea Bissau population on fisheries is shown in Table 44. This excludes an estimated 4,600 to 6,600 foreign fishers working in the small scale fisheries. It also excludes unknown numbers of estuarine and riverine fishers. Overall, employment dependency is low, being of the order of 0.75%. However, the ratio is expected to be significantly higher in coastal regions.

Table 44 : Employment and dependency ratios in fishing in Guinea Bissau

Population	2005 estimate
Total Population	1,326 million
Employment in Fisheries Sector	2001 / 2004
Artisanal Fishermen (2001 census) FTE	1680
Industrial Fishers in Foreign Fleet	227
Fishers in Industrial EU/FPA Fleet	109
Observers	200
Women Processing and Fish Vendors (2004)	7380
Semi-industrial project (onshore personnel)	128
Administration (Ministry.; DGP; DPA; FISCAP; CIP;)	180
Total employment in fisheries	9904
Ratios (employment)	
Ratio of Total employment in Fisheries	0,75

Sources: CIPA, DGP, Consultants estimates.

2.12.1.1.6 Nutritional dependency on fish

Artisanal annual production is estimated to be around 135.000t with 24.000t (17%) consumed by the national market and the remaining taken to the neighbour countries, by artisanal fishers of respective nationalities fishing in Guinea Bissau (Silva, 2005). Artisanal production is the main source for about two-thirds of fish consumption in Guinea Bissau, with the balance derived from semi-industrial national vessels and landings of industrial vessels.

Average annual *per capita* supply is estimated by the consultants to be between 20 to 28kg. Fish is estimated to account for about 70% of total protein intake. Nutritional dependency on fish products is therefore quite high and, in common with several neighbouring countries, fish is in fact an important source of animal protein. Consumption is skewed to coastal regions and in Bissau, where consumption may be 3-4 times higher than elsewhere in the country, where it is thought to be less than 7kg *per capita per annum*.

2.12.2 EU Stakeholders

2.12.2.1 Income and employment in the EU Industrial (EC fleet)

On average, during the 9th Protocol the EC industrial fleet licensed to fish in GB waters has comprised about 81 vessels, including:

- 6 shrimp trawl vessels from Aveiro Portugal, although in 2005 most may have moved to Mozambique waters due to low profitability of fishing in Guinea Bissau. Average crew size is 16, comprising 10 Portuguese, 6 from Guinea Bissau.
- Around 20 Spanish shrimp trawlers from Huelva and Galizia, average crew size is 16, comprising 5 from Spain, 3 from Guinea Bissau and the rest from other African countries

- An average of 9 Italian shrimp trawlers, average crew 15.5 from Italy and 3 from Guinea Bissau
- 9 Spanish Cephalopod Trawlers, from the Canarias, Cadiz and Vigo, with average crew size 17, of which 5 are from Spain, and 3 from Guinea Bissau
- an average of 3 Italian cephalopod trawlers, from companies based in Bari, with average crew size 17, of which 3 are from Italy, and 5 from Guinea Bissau
- tuna vessels (27 purse-seine and 9 pole and line vessels) originating mainly from Spain (tuna purse-seiners from Bermeo in the Basque Country, and pole and line from Galizia and Basque region) and France (Concarneau), although the dependency on catches are extremely low (0,2%)

Trawl fleet activity in Guinea Bissau waters is characterised by a 79% dependency for shrimpers and 62% for other trawl segments.

2.12.2.2 Up and downstream activities

Many of the industrial fishing vessels that operate in the Guinea Bissau EEZ use Dakar, Senegal or Las Palmas, Canary islands as their operational base. Vessel servicing, input supplies and transshipment and cold storage services are procured in these locations. In the case of the tuna purse seine and pole and line fleets, some tuna is processed in Dakar. However, most is transhipped for processing in canneries in the Basque Country of Spain, Galicia and Concarneau in Brittany.

Shrimp and cephalopod products are frozen at sea. There is some limited re-processing (for example breaking bulk, and retail packaging), more so for cephalopods than shrimp. This takes place mainly in Spain and Italy, but activities are rather dispersed.

2.12.3 CONAPEMAC and FEDERPESCA

Twelve Chinese personnel, and a few shore support staff are also employed on the semi-industrial trawlers supplied under the CONAPEMAC agreement.

Employment on the vessels fishing under the FEDERPESCA agreement is similar in profile to the Italian flagged vessels fishing under the EU agreement. In 2004, 10 vessels were operating, average crew 15, of which 5 were from Italy and 3 from Guinea Bissau.

2.12.4 B.12 Summary of stakeholder interests

The breakdown of the main stakeholders in Guinea Bissau is shown in Table 45. In total it is estimated that some 14,660 persons are employed in activities associated with the small scale fisheries and 1661 in the industrial fisheries.

Table 45 : Main Fishery sector stakeholders and production

	Subsistence and Artisanal Fishery	Fish Industrial Fishery (excl EC FA fleet) ^{/a}	EC Fleet	
			Trawl ^{/b} (2003/2004)	Tuna ^{/c} (in 2004)
Production (Tonnes)	30,000 – 50,000	4,000 landings in GB	6,858.3	428.68
Directly employed (Full Time Equivalent)	1680 ^{/d}	227	109 ^{/e}	0
Observers directly employed (Full Time Equivalent) ^{/f}	0	77	32	0
		91		0
Foreign fishers directly employed (Full Time Equivalent)	4,600 – 6,600	506	270 ^{/g}	
Artisanal Processing and Fish Distribution Indirect employment (National)	7,380 ^{/h}			0
Indirect employment (EU) (Full Time Equivalent)	0		236	6
Direct employment (EU) (Full Time Equivalent)	0	34 ^{/i}	170 ^{/j}	3

^{/a} Considers the following fleets operating in 2004: CIFC, Chartered, Federpesca and National

^{/b} Estimated catch, although believed to be under-estimated due to catch under-declaration

^{/c} Data according to dependency factor of catches in GB waters

^{/d} Estimate based on 2001 CIPA Census and on 50% FTE

^{/e} Average of 3 GB crew members/vessel

^{/f} Considers one observer per vessel, with the remainder of a corps of 200 staying on land

^{/g} Considers average 9 foreign fishers crew members (non EU or GB)

^{/h} Estimate based on CIPA Registration on 2004 accounting for 4908 women and 2234 fishers although not covering the Arquipelago of Bijagós region which accounts for around 1100 men in previous years. The proportion of women for the Bijagós was therefore extrapolated.

^{/i} Chartered and Federpesca vessels

⁴ Average of 4 EU crew members/vessel

2.13 POTENTIAL FOR PRIVATE SECTOR INVESTMENT

At present the potential for additional foreign direct investment in the onshore fishery sector is weak. There is virtually no institutional or physical infrastructure for the development of up- or downstream activities related to the Fisheries Partnership Agreement. Port facilities are rudimentary, and fuel supplies are erratic, increasing the costs of visits to port. Shore based support facilities for crew exchanges (for example hotels, air communications) are also more expensive and less reliable than some of the alternatives.

The investment code allows for repatriation of dividends and profits after taxes. Elements of the investment code are aimed at reducing the bureaucratic processing required. Some incentives are provided in the form of reduced import tariffs on capital investment and tax breaks. However, implementing these has proved to be difficult. The investment code provides guarantees against nationalization and expropriation. The International Monetary Fund reports that both residents and non-residents may hold foreign exchange accounts with the permission of the Banque Centrale des États de l'Afrique de l'Ouest (Central Bank of West African States, or BCEAO). Capital transfers to members of the UEMOA are unrestricted, aside from direct investments. However certain movements of capital between residents and non-residents, such as personal loans, gifts or inheritances, or transfer of assets are subject to Ministry of Finance approval. The banking sector is also weak. The Banque Centrale des États de l'Afrique de l'Ouest (Central Bank of West African States, or BCEAO) is a central bank common to the eight members of the UEMOA. Guinea-Bissau's domestic banking system was shut down in 1998 during the civil war and only reopened in July 1999. Banking has been severely weakened, as local businesses were bereft of capital during the war and many loans are now unrecoverable. Of the other two banks that were active briefly after the conflict, the Banco Totta & Açores withdrew from the country in March 2002 and the Banco Internationale da Guiné-Bissau has been liquidated. The Banco Occidental (BAO) was established in 2001 with local and Portuguese capital and is still operational.

In general, shore based investment by European operators continues to be inhibited by

- an archaic, complex, and mismanaged tax system
- poorly defined Law and Regulations on companies and land
- customary/traditional laws prevailing in the countryside and certain ethnic groups

Investments in the fishing sector, including for the establishment of joint venture operations, suffer from the high risk of: (i) civil disturbance (ii) an uncertain political outlook, (iii) a virtual collapse of sector governance, (iv) an outlook of declining earnings caused by excessive, uncontrolled fishing, (v) a highly uncertain, often contradictory, regulatory environment, (vi) a lack of a multitude of essential sector service, and (vii) lack of access to the European Market due to the failure to comply until now with sanitary conditions first introduced by the Community in 1993.

3 EVALUATION SPECIFIC TO THE FISHERIES PARTNERSHIP AGREEMENT

3.1 EVOLUTION OF THE FISHERIES PROTOCOLS

The Framework Agreement governing fisheries relations between the republic of Guinea Bissau and the EU was adopted by Council Regulation No.2213/80 on 27th June 1980. The current protocol is the 9th five-year protocol to be agreed. The evolution of the protocols operated under the fisheries agreement is shown in Table 46.

Table 46 : The evolution of the protocols operated under the fisheries agreement

Period covered	Total financial contribution (€)	Targeted actions (€)	Targeted actions (%)
16/06/04 15/06/06	44,520,000 (10,000,000/year the first three years 7,260,000 the last two years)	3,250,000	6,74
16/06/01 15/06/04	51,000,000 (10,000,000/year the first three years 10,500,000 the last two years)	3,000,000	5,88
16/6/97 15/6/01	36,000,000 (9,000,000/year)	2,000,000	5,56
16/6/95 15/5/97	11,500,000 + 1,200,000 (5,750,000/year + 600,000)	700,000	5,76
16/6/93 15/6/95	12,700,000 (6,350,000/year)	700,000	5,51
16/6/91 15/6/93	13,350,000 (6,675,000/year)	1,350,000	10,11
16/6/89 15/6/91	11,930,000 (5,965,000/year)	1,100,000	9,22
16/6/86 15/6/89	7,900,000 (2,633,000/year)	400,000	5,06
15/3/86 15/6/86	Extension of previous Protocol Pro rata temporis	---	
16/3/83 15/3/86	4,275,000 (1,425,000/year)	---	
1981 1983	FF 12,800,000 (FF 6,400,000/year)	---	

3.2 SUMMARY OF THE CURRENT EC PROTOCOL

3.2.1 History and course of the Protocol

In recent years, Guinea Bissau has been plagued by political instability that has disrupted the operation of the Agreement. As a result of the armed conflict in Guinea Bissau June 1998- March 1999, the Community fleet left the waters of Guinea Bissau. This temporary break in fishing also meant the non-payment *pro rata temporis* of the financial contribution under the 8th Protocol. In order to facilitate the return of sustainable fishery activities in Guinea Bissau waters, following the armed conflict, the Council adopted a Decision on 26 February 2001, setting the terms for *ad hoc* financial support to the Guinea Bissau fisheries sector (to a value of €6.500.000).⁴⁰ Half of this was advanced in 2001. The payment of the balance of the funds (€3.250.000) should have taken place before 31 May 2003. However, due to the problems in Guinea Bissau, the obligatory report and the programming were delayed. Therefore, the terms of the Ad Hoc Decision were renegotiated in 2003.

In the meanwhile the 9th Protocol was negotiated and put in place for the period 16 June 2001 to 15 June 2006. The Protocol was originally set out in Council Regulation (EC) No 249/2002 of 21.01.2002, and covered the period 16 June 2001 to 15 June 2006. The main features of the Protocol are that fishing opportunities are provided for EU shrimp trawlers, cephalopod/fish trawlers, tuna seiners, pole and line and surface long line vessels in return for a financial contribution consisting of a financial compensation, and targeted actions in support of the fishery sector. The main characteristics of the 9th protocol pre-amendment are set out in Table 47.

At the mid-term stage, due to the limited uptake of shrimp fishing opportunities and the weak management of the fisheries, there was a risk that the Fishery Agreement would be renounced and that the Ad Hoc Decision would be closed. However, after interventions by the Commission in 2003 (Technical meeting in January, advance of financial contribution⁴¹, Joint Committees in May and November including renegotiation of the Present Protocol, reprogramming of targeted actions, introduction of double signature on targeted actions account etc), the Fishery Agreement and the Ad Hoc Decision remained in force and a substantive amendment was therefore agreed between the parties. This is set out in Council Regulation (EC) No 829/2004 of 26.04.2004 for the period 16 June 2004 to the end of the Protocol. After the amendment to the Protocol, the main characteristics were as shown in Table 47.

Since the amendment of the 9th Protocol, annual payments from the Community comprise a compensation element of Me7.26 per annum, and additional finance for targeted actions of up to Me3.25, being the unpaid outstanding balance of finance available under the ad hoc decision to support Guinea Bissau during the period of suspension of fishing activities under the previous protocol in 1998/1999. At the time of writing the amendment has therefore just completed its first year.

A technical meeting between the Commission and the Guinea Bissau authorities took place in Bissau on 7-8 June 2004. The aim of the mission was to obtain firm political commitments from the new Guinea Bissau Government on the management of the fishery resources, especially concerning the reduction of the fishing effort from other foreign fleets to the level of those already made by the EC and the strengthening of Guinea Bissau's capacity in maritime control and surveillance. As will become clear, these issues still threaten the financial and economic sustainability of the Agreement. Both parties agreed on a list of measures to be taken concerning the reduction of the fishing effort on sensitive segments, the fishery agreements with other international parties, and the surveillance of the EEZ of Guinea Bissau. In addition, Guinea Bissau would, with the support of the Commission, launch a sector analysis in order to finalise a new fisheries policy before the end of 2004. The Commission also decided to support the efforts

⁴⁰ Council Decision of 26 February 2001 (OJ L66 of 8 March 2001).

⁴¹ After having discussed the problems in detail together with the Guinea Bissau authorities in January 2003, the Commission prepared and the government of Guinea Bissau accepted an Aide Mémoire on control, surveillance and the reduction of fishing effort in order to improve the situation. The Commission considered that putting the recommended measures into place in the short term required a financial solvency that currently did not exist in Guinea Bissau. Given this context, and in the general framework of crisis at the National Treasury of Guinea Bissau, the Commission adopted a Decision on 19 March 2003 granting to the government of Guinea Bissau an advance of 50% of the payment envisaged for 2003.

of Guinea Bissau by financing technical assistance in order to define a surveillance policy, and by sending an expert to analyse and update the fisheries legislation in Guinea Bissau and finally, by launching the impact study earlier than foreseen. The agreement reached enabled the Commission to un-block the payments of the financial compensation, the 1st part of the 2nd instalment of the Ad hoc Decision and the targeted actions for the development of the fishery sector.

A further technical meeting between the Commission and the Guinea Bissau authorities took place in Bissau on 2-4 March 2005. The aim of the mission was to verify the implementation of the proposed reforms of the Fisheries Sector Policy and the support measures decided upon in June 2004, within the framework of the Fishery Agreement. Both parties discussed the situation as regards the advancement of the implementation of the different actions in light of the financial crisis of the State, and also taking into consideration the delays caused by an attempted *coup d'état* in October 2004. The analysis made by both parties concentrated strictly on issues related to the Fishery Agreement. However, the European Commission mission was fully aware of the financial and political issues at stake and the possible serious implications for political stability in the country. Given the globally positive results of the mission, and in particular the fact that the financial management was considered to be correct, and underlining the climate of confidence and political willingness by the government to implement the measures in order to ensure a good management of the resources, via a reduction of the fishing effort and an improvement of the maritime surveillance, the Commission decided to give a positive answer to the request presented by the Guinea Bissau Government for a contribution to improve the state of the Treasury. A draft Commission Decision, on an advance (€5,000,000) of the financial compensation under the Fishery Protocol, has therefore been launched. The Decision was adopted in April 2005 and the payment was made in June 2005.

3.2.2 *Main Features of the current protocol*

A summary of the main provisions of the 9th. Protocol and its amendment are shown in Table 47.

Table 47 : 2001/06 and 2004/06 Protocols

	2001/2004	Amendment 2004/06
Financial contribution (€)		
Average Annual Financial Compensation	10,200,000	7,260,000
Targeted Actions:	3,000,000	3,250,000 ¹
Fishing Opportunities		
<i>Pole and line and surface long-lines</i>		
Catch Limit according to Annual licence fee ^a	15 t (Pole & Line) 25 t (long-line)	15 t (Pole & Line) 25 t (long-line)
Max N° Vessels	36	30
Licence fee unit (€/t)	25	25
Annual Licence fee ^a (€)	375	375
Annual Fish Landing flat-rate payment (€)	23	23
<i>Tuna Seiners</i>		
Catch Limit according to Annual licence fee ^a	90 t	90t
Max N° Vessels	40	40
Licence fee unit (€/t)	25	25
Licence fee ^b (€)	2250	2250
Annual Fish Landing flat-rate payment (€)	23	23
<i>Fish/Cephalopod Trawlers</i>		
Catch Limit according to Annual licence fee ^a	w/l	w/l
Size Limitation (GRT/year)	2,800	4,400
Licence fee ^a €/GRT	197 (Fish); 219 (Cephalopode)	197 (Fish); 219 (Cephalopode)
Annual Fish Landing flat-rate payment (€)	23	23
<i>Shrimp Trawlers</i>		

	2001/2004	Amendment 2004/06
Catch Limit according to Annual licence fee ^a	w/l	w/l
Size Limitation (GRT/year)	9,600	4,400
Licence fee ^a €/GRT	279	279
Annual Fish Landing flat-rate payment (€)	23	23
Responsible Fisheries Agreement	Undertake annual joint scientific meeting to monitor stock status	
Employment in Trawlers	3 fishers – vessels < 250 GRT, 4 fishers – vessels 250 < 400 GRT 5 fishers – vessels 400 < 650 GRT, 6 fishers – vessels > 650 GRT	
Employment in Tuna vessels	7 fishers in the tuna seiner fleet, 17 fishers in pole & line and long-line fleet (maximum 1/vessel). Optionally can be paid the equivalent of the salary of fishers not recruited	
Observers	1 Observer/ trawler Observer fee: 10 €/GRT/year <i>pro rata temporis</i> / vessel Observers in tuna vessels only at request of GB Government Transport of observer to GB from foreign ports at cost of vessel	
Fishing zones	Trawlers from 12 nautical miles of base line	
Minimum mesh sizes (trawl body)	70 mm demersal fish/cephalopode trawlers 40 mm shrimp trawlers	
By-catch limits	Demersal fish trawlers: 9% crustaceans and cephalopods Cephalopod Trawlers: 9% crustaceans and fish Shrimp Trawlers: 50% fish and cephalopods	

/a – In case catch is over the limit of licence paid the balance will be at the end of the year; licences may be emitted quarterly, six monthly or annually

w/l - without limit

^b The licence fee is payable by the vessel operators on an annual, semester or trimester basis

¹ To be financed out of the balance of resources available under the “ad hoc decision

3.2.3 *Activities under the protocol*

3.2.3.1 *Utilisation of fishing opportunities*

The summary of fishing opportunities defined in Article 1 of the Protocol and licences drawn for the first three years of the 2001-2006 protocol is shown in Table 48. This is based on data from the European Commission. However, it is apparent that whilst the Commission receives valid and reliable data regarding the tuna segment licences (purse seine and pole and line) this is not the case for the trawl vessel licences. The Table therefore incorporates licence data derived from the European Delegation and the Ministry of Fisheries in Bissau.

In total, fishing licences were drawn by an annual average of 78 EU fishing vessels, comprising 33 shrimp trawl vessels, 9 cephalopod/fish trawl vessels, 27 purse seiners, and 9 pole and line vessels. The main features of the utilisation of the fishing opportunities are:

- Take up rate of the licences has continued to be high for the tuna purse seine fleet, drawn by both French and Spanish vessels, averaging 70-80% during the first three years of the Protocol.
- Surface long-line fishing opportunities are hardly utilised at all. Only three licences were issued in 2002 and 2003 (to Spanish vessels). No surface long-line opportunity has ever been taken up during the course of this agreement by Portugal
- Uptake of the pole and line opportunities by Spain and France is less than 50%, with France accounting for a much higher rate of utilisation (c.80%)
- Shrimp trawlers utilisation has been in the order of 40%, with Spanish and Portuguese trawlers uptake of licences being of the order of 35% in 2003/2004; on the other hand, uptake by Italian vessel owners was higher over the first 3 years of the Protocol, between 50 and 60%. No shrimp licences attributed to Greece were taken up during the Protocol.
- Fish/cephalopod trawl utilisation has been between 60 and 70% overall, with utilisation by Spanish vessels increasing to 100% in the last two years. Italian and Greek utilisation rates are much lower, 42 and 21% respectively. Greek trawler owners did not take up licences in 2001/2002, but used 20-40% of opportunities in the remaining years.

It is too early to assess the effect of the amended protocol since there were no data available at the time of the mission. However anecdotal evidence from the stakeholder interviews (section 3.2.4.1.3) suggests that the incentives to take up shrimp fishing opportunities have not improved and several operators have moved their vessels to other fisheries.

Table 48 : Number of fishing opportunities available drawn and utilised by EU vessels fishing under the EU- GB fisheries protocol (2001-2004)

SECTOR/COUNTRY	2001/2002			2002/2003			2003/2004			Average		
	Licences			Licences			Licences			Licences		
	N° Vessels or GRT			N° Vessels or GRT			N° Vessels or GRT			N° Vessels or GRT		
	Available	Drawn	%	Available	Drawn	%	Available	Drawn	%	Available	Drawn	%
Tuna seiners (in N° Vessels)	39	29	74	39	30	77	39	28	72	39	29	74
France	19	13	68	19	14	74	19	12	63	19	13	68
Spain	20	16	80	20	16	80	20	16	80	20	16	80
Pole and line (in N° Vessels)	36	14	39	36	16	44	36	16	44	36	15	43
Spain	25	9	36	25	11	44	25	11	44	25	10	41
France	6	5	83	6	5	83	6	5	83	6	5	83
Portugal	5	0	0	5	0	0	5	0	0	5	0	0
Shrimp freezers (in GRT)	9,600	3,814	40	9,600	3,865	40	9,600	3,933	41	9,600	3871	40
Spain	2,400	1,073	45	2,400	815	34	2,400	949	40	2,400	946	39
Italy	3,900	2,021	52	3,900	2,240	57	3,900	2,021	52	3,900	2094	54
Portugal	3,050	720	24	3,050	810	27	3,050	963	32	3,050	831	27
Fish and cephalopods (in GRT)	2,800	758	27	2,800	2,184	78	2,800	2,671	95	2,800	1871	67
Spain	1,870	758	41	1,870	2,002	107	1,870	1,950	104	1,870	1570	84
Italy	500	0	0	500	0	0	500	630	126	500	210	42
Greece	430	0	0	430	182	42	430	91	21	430	91	21

Source of license data for tuna vessels: European Commission, DG Fisheries License Unit

Notes: Trawl fleet based on average licenses issued according to GB license database and average GRT per country and fleet used in model.

3.2.4 *Fishing activities under the Agreement*

3.2.4.1.1 *Purse seiner segment*

Over the course of the Protocol an annual average of 27 purse seiners have drawn licences to fish in the GB EEZ. EU tuna vessels fish in Guinea Bissau waters within the framework of a regional strategy to follow schools of large migratory fish, tuna and tuna-like species. The management of these stocks is within the framework of the regional organization ICCAT, of which the European Community is a member, but Guinea Bissau is not.

Because of the highly migratory characteristics of tuna, the European tuna seiners, both Spanish and French, tend to exploit a large area, bordered by the parallels 20°N and 10°S, the African Coast and the meridian 30°W. This area includes the EEZ of more than twenty West African countries (the underlined : States are those with which the EU has fishing agreements) : Mauritania, Senegal, Cape Verde, Guinea Bissau, Guinea Conakry, Sierra Leone, Liberia, Ivory Coast, Ghana, Togo, Benin, Nigeria, Equatorial Guinea, Sao Tomé, Gabon, Congo, Angola) and a important part outside of the ZEE. However, the waters off Guinea Bissau are considered of minor importance in the general context of the fishery, although some catches are reported. Overall, the Guinea Bissau EEZ accounts for only 0.6% of the catches of the EU purse seine tuna fleet.

3.2.4.1.2 *Pole and line segment*

Pole-and-line is of some importance along the northwest African coast, particularly in the Senegal area and further north. Spanish, French, and Senegalese vessels dominate the fishery, catching primarily skipjack tuna as well as some yellowfin and bigeye tuna. Fish is brine frozen onboard and transhipped in bulk, usually to supply canneries in Dakar. However this type of fishery does not appear to be of major importance in Guinea Bissau, which is very much to the southern limit of the range of these vessels. On average only 9 vessels have drawn licences for each year of the current Protocol, but their overall level of dependency on Guinea Bissau is less than 2%. In 2004, 14 vessels were licensed for the whole year but only three vessels fished for one month (in December 2004). For 2005, until May, 12 vessels had taken licences for 6 months each

3.2.4.1.2.1 *Surface long-line fisheries*

Concerning surface long-line fisheries, these are pursued in the region by EU and SE Asian vessels with a substantial level of activities in the region of the Cape Verde Islands. Typically the EU vessels long-line target swordfish and shark, whereas the SE Asian vessels target tunas. A part of the fishing effort by the EU long-line fleet is developed in the waters off the West African coast, in particular the area of Senegal-Cape Verde, and the area of Angola (including Sao Tomé, Gabon, and Angola). However, the waters off Guinea Bissau do not appear to be of much importance for both the European and Asian fleets. Only one Spanish vessels took a long-line licences in 2002, and 2 in 2003, and there is no record of any catches. Effective dependency on the partner country EEZ is zero.

3.2.4.1.2.2 *Trawl segment*

An average of 33 EU shrimp trawlers and 9 cephalopod trawlers have fished in the GB EEZ during the course of the 9th Protocol. These comprised an average of 18 Spanish, 6 Portuguese and 9 Italian shrimp trawlers. The cephalopod trawlers were of Spanish nationality. In 2002 to 2004 an average of two Greek vessels also operated for very short periods, targeting cephalopod and fish.

Portuguese Shrimp vessels conduct almost 100% of their activity in Guinea Bissau waters, although they may occasionally fish in Conakry or Senegal when catch rates are reduced. They target only shrimp. Of the six vessels operating regularly, in 2005, four have decided to move to Mozambique due to the low profitability of the fisheries. An average of 22 Spanish trawlers maintain about 50%-60% activity in Guinea Bissau waters, targeting other areas such as Senegal and Conakry as part of the routine fishing pattern. Portuguese and Spanish vessels operate for 10-11 months per year.

Italian shrimp trawlers follow a different strategy. Most of the 9 vessels in the Italian segment appear to be active for about 6 months per year, operating only during periods of greater catch rate, and otherwise remaining in port in Dakar. Only 1-2 Italian vessels work the full year, by also fishing in Senegal or Conakry. It is thought that the Italian vessels tend to target the shallower water shrimp, but also declare a significant catch of cephalopods and fish.

EU vessels present multi-species catches of shrimp, including the following target species:

Shallow coastal waters	Deepwater
White shrimp (<i>P. notialis</i>)	Rose shrimp / Gamba (<i>Parapenaeus longirostris</i>) 150 to 600m
Tiger shrimp (<i>P. monodon</i>)	Striped red shrimp / Gamba listada (<i>Aristeus varidens</i>) 300–600m
Langostino (<i>P. trisulcatus</i>)	

Although Spanish and Portuguese vessels do target the deep-water shrimp species, declared catch profiles indicate that they achieve high prices in international markets. Italian shrimp vessels (as well as those vessels which fish under the FEDERPESCA and CONAPEMAC Agreements) prefer to target shallow water shrimp species, with cephalopod and fish as a substantial by-catch.

The 9 EU Cephalopod trawlers that have operated under the Protocol have in recent years all been Spanish flagged, operating from their base in Las Palmas. They target cuttlefish and octopus, but hake is an important by-catch, accounting for 45% of the landings. On average they operate in the EEZ for about 60% of the time, the balance being in Senegal, Mauritania or Conakry.

EU Trawlers visit Dakar or Las Palmas every 1.5 – 2 months for landings or transshipment of catch, and to take on fuel, food and water supply. Repairs are undertaken at the home base (Huelva or Vigo in the case of Spanish vessels, and Aveiro in the case of Portugal. Italian vessels rarely return to a domestic base.

All products are frozen and packed on board. Cephalopod and fish are packed in 20kg boxes and transhipped for further processing, usually in Dakar, Vigo or Italy. Shrimp are frozen in final packaging (1.5 to 2kg packs). Destinations for products from the Spanish Cephalopod trawlers are 75% Spain / Italy and 25% Japan. Italian shrimp vessels sell mainly into the Italian market, Portuguese and Spanish shrimp vessels sell mainly into the Spanish market, although about 30% of output from Portuguese vessels is distributed on the domestic market in that country.

3.2.4.1.3 Catches

Table 49 below shows the level of activity of vessels drawing licences in each fleet segment, and the resulting catches. For the tuna sector (purse seine and pole and line) these catches are the actual catches reported via official channels to the European Commission. For the trawl sector, these catches are estimated, based on different sources, including observer data from CIPA; catch declarations held by member states and interviews with stakeholders. The main features of note are that:

- Tuna purse seining yielded an average catch of 594 tonnes from the average 27 vessels licensed. However catches are consistent year by year.
- Reported catches by the EU pole and line vessels in the EEZ of Guinea Bissau are variable ranging from 202 tonnes in 2001/2002 to just 8 tonnes in 2002/2003.
- The low utilisation of the surface long line fishing opportunities average 1.5 vessels/year over 2002/2003, resulted in just 3 tonnes of catches declared (not indicated in Table 49)
- Over the first 3 years of the Protocol catches by EU shrimp vessels in the Guinea Bissau EEZ totalled averaged 5,813 tonnes (174/vessel) tonnes

- Catches by cephalopod/demersal fishes trawlers averaged 1,977 tonnes (230 tonnes./vessel)

Table 49 : Licence Utilization and estimated catches of fish 2001 to 2004

	2001/2002																	
	Spain			France			Portugal			Italy			Greece			TOTAL		
	Month licenses / vessel	Nr active vessels	TOTAL catch	Month licenses / vessel	Nr active vessels	TOTAL catch	Month licenses / vessel	Nr active vessels	TOTAL catch	Month licenses / vessel	Nr active vessels	TOTAL catch	Month licenses / vessel	Nr active vessels	TOTAL catch	Month licenses / vessel	Nr active vessels	TOTAL catch
Purse seine	N.a.	6	260.5	N.a.	8	503	0	0	0	0	0	0	0	0	0	N.a.	14	763.5
Pole & line	N.a.			N.a.	3	129.5	0	0	0	0	0	0	0	0	0	N.a.	3	129.5
Long-liners	N.a.	1	73.03	N.a.	0	0	0	0	0	0	0	0	0	0	0	N.a.	1	73.0
Shrimp Trawl	5.6	20	2,836.4		0	0	9.6	5	1,215.6	9.9	7	1,755.0	0	0	0	7.1	32	5807.0
Cephalopod / Fish Trawl	7	5	782.7		0	0	0	0	0,0	0	0	0,0	0	0	0	7	5	782.7
TOTAL		32	3,952.63		11	632.5	9.6	5	1,215.6	9.9	7	1,755.0	0	0	0		55	7,555.8
	2002/2003																	
	Spain			France			Portugal			Italy			Greece			TOTAL		
	Month licenses / vessel	Nr active vessels	TOTAL catch	Month licenses / vessel	Nr active vessels	TOTAL catch	Month licenses / vessel	Nr active vessels	TOTAL catch	Month licenses / vessel	Nr active vessels	TOTAL catch	Month licenses / vessel	Nr active vessels	TOTAL catch	Month licenses / vessel	Nr active vessels	TOTAL catch
Purse seine	N.a.	2	120	N.a.	7	511.74	0	0	0	0	0	0	0	0	0	N.a.	9	631.7
Pole & line	N.a.			N.a.	2	8.23	0	0	0	0	0	0	0	0	0	N.a.	2	8.2
Shrimp Trawl	5.0	17	2,153.6	0	0	0	10.8	5	1,368.2	9.6	8	1,945.9	0	0	0,0	7.2	30	5,467.7
Cephalopod / Fish Trawl	6.6	14	206.5	0	0	0	0	0	0,0	0	0	0,0	6	3	402.6	6.4	17	2,469.0
TOTAL		33	4,340.1		9	519.97	10.8	5	1,368.2	9.6	8	1,945.9	6	3	402.6		58	8,576.7

	2003/2004																	
	Spain			France			Portugal			Italy			Greece			TOTAL		
	Month	Nr active	TOTAL	Month	Nr active	TOTAL	Month	Nr active	TOTAL	Month	Nr active	TOTAL	Month	Nr active	TOTAL	Month	Nr active	TOTAL
	licenses / vessel	vessels	catch	licenses / vessel	vessels	catch	licenses / vessel	Nr active vessels	catch	licenses / vessel	vessels	catch	licenses / vessel	vessels	catch	licenses / vessel	vessels	catch
Purse seine	N.a.	5	688	N.a.	1	12	0	0	0	0	0	0	0	0	0	N.a.	6	688.0
Pole & line	N.a.	2	58.49	N.a.	1	15	0	0	0	0	0	0	0	0	0	N.a.	3	58.5
Shrimp Trawl	5.5	18	2,508.3	0	0	0	10.7	6	1,626.6	8	10	2,026.9	0	0	0.0	7.2	34	6,161.8
Cephalopod / Fish Trawl	6.0	15	2,009.4	0	0	0	0	0	0.0	4.2	5	468.9	9	1	200.9	5.8	21	2,679.2
TOTAL		40	5,205.7		2	27	10.7	6	1,626.6		15	2,495.8	9	1	200.9		64	9,587.5
	2004/2005																	
	Spain			France			Portugal			Italy			Greece			TOTAL		
	Month	Nr active	TOTAL	Month	Nr active	TOTAL	Month	Nr active	TOTAL	Month	Nr active	TOTAL	Month	Nr active	TOTAL	Month	Nr active	TOTAL
	licenses / vessel	vessels	catch	licenses / vessel	vessels	catch	licenses / vessel	Nr active vessels	catch	licenses / vessel	vessels	catch	licenses / vessel	vessels	catch	licenses / vessel	vessels	catch
Purse seine	N.a.	3	222.00	N.a.	6	42	0	0	0	0	0	0		0	0	N.a.	9	264
Pole & line	N.a.	3	119.68	N.a.	3	66	0	0	0	0	0	0		0	0	N.a.	6	185.68
TOTAL		6	341.68		9	108	0	0	495	0	0	0		0	0		15	449.68

Source: DG Fish and GB license database

Notes and Assumptions:

1. Average annual catch rates are standard across the vessels of different nationality in same fleet segments
2. No data available for tuna fleet in 2000/2001
3. There was no long-line utilisation declared from 2002 to 2005
4. Average annual catch rates for Fish Trawl is considered similar to Cephalopod trawl
5. Month licences / vessel are only considered for trawl segment
6. Tuna and fish trawl fleet data correspond to calendar year
7. Trawl fleet catches are believed to be underestimated due to possible under declaration of catch. Therefore estimated average catches from model are applied.

3.2.5 Community vessels compliance with Agreement provisions

3.2.5.1 Catch declarations

EU vessels are required to submit catch declarations to the Ministry of Fisheries with a copy to the EC Delegation in Bissau. The Ministry of Fisheries receives declarations via the EU Delegation in Bissau.

Catches reported by the tuna purse seine and pole and line segments appear to be reliable and valid (since they form the basis for the payment of licence fees). For other segments, there are known discrepancies in the catch reporting system. Neither the Ministry of Fisheries nor DG Fisheries can provide a full set of declarations for the periods covered by the licence fees. The shrimp and fish/cephalopod segments appear to be particularly lacking. In the EC Delegation in Bissau only declarations of Spanish and Portuguese vessels were observed by the consultants, covering part of the 2001 to 2003 period. No catch data is available from Italy. For Greece it is only available for 2002/2003 (no licences were taken up in 2003/2004). Where catch declarations are made, these consistently indicate a catch rate which is known to be financially unviable, suggesting a widespread under-declaration. Because of the limitations on catch reporting in respect of the trawl fishery, the catch data held for this segment by the Commission cannot be regarded as sufficient basis for the estimation of the economic benefits of the Agreement. The consultants' catch estimates are therefore used as the basis for these calculations.

3.2.5.2 By-catch

The 9th Protocol and its amendment limit retention on board demersal trawlers of by-catch of non-target species. There is a requirement to land minimum quantities of fish from this segment, subject to a fine of €1000/tonne of fish not landed. The by-catch limits and landing requirements are shown in Table 50.

Table 50 : By-catch limits and landing requirements indicated in the 9th Protocol.

Segment	Permitted By-catch	Limit (% of total EEZ catch on board)	Landing requirement (kg/GRT/quarter)
Finfish trawl	Crustacea/Cephalopod	9	50
Cephalopod trawl	Crustacea	9	30
Shrimp trawl	Cephalopod/Fin fish	50	10

Discussions with stakeholders suggest that non-target catch rates are significantly higher than the limits set in the Protocol. Whilst Spanish and Portuguese shrimp vessels appear to comply with the limits for retention on board, this is most likely on account of a high-grading policy and results in significant levels of discards. There is some evidence from the CIPA catch reports recorded by observers that Italian shrimp trawlers retain a higher proportion of the catch, around 60-80% (as fish and cephalopods) exceeding the Protocol limit of 50%. It is not known how much of this excess by-catch was caught under the EU-Guinea Bissau Protocol and how much under the FEDERPESCA agreement, but it would appear to be a reasonable assumption that there is little difference in the fishing strategies within the Italian shrimp fleet segment. In general, it would appear that the by-catch limits in the Protocol are exceeded by the Italian shrimp trawl segment. For the other segments the weak international market for some of the non-target species result in a significant level of discard. Assuming 5% shrimp in the haul would imply an annual discarding of some 28,000 tonnes of non-target catch by EU vessels operating under the Agreement.

3.2.5.3 Infractions of fisheries regulations

EU vessels, with an average of 78 vessels in the fishery every year during the current Protocol, have been arrested for infractions only 6 times in as many years. Detected fishing offences by EC vessels are listed in Table 51. These six offences are said by Guinea Bissau authorities to be relatively minor, in comparison

with the control problems experienced with the non-licensed vessels (18 infractions) and vessels licensed under the other fisheries access arrangements (82 infractions in the same period).

Table 51 : EU-FPA vessel infractions from 1999 to 2004 for all gear types

Vessel name	Flag	vessel type	1999	2000	2001	2002	2003	2004	Totals
Alfonso Riera I	Spain	Shrimper			1				1
Alfonso Riera II	Spain	Shrimper			1				1
Hittipesca III	Italy	Shrimper	1						1
Hittipesca IV	Italy	Shrimper	1						1
Kissamos	Greece	Fish Trawler					1		1
Pochea	Italy	Shrimper			1				1
TOTAL			2	0	3	0	1	0	6

In comparison with the vessels fishing under the EU Agreement, FEDERPESCA vessels, operating an average of 10 vessels a year, have been arrested 18 times,. This entails an infraction incidence 25 times higher than the one of the EU fleet. The CONAPEMAC fleet, with an average of 24 vessels in the fishery, displays an infraction incidence also 25 times higher than the one of the EU fleet. However recent observer reports suggest that Chinese operators have started to improve compliance with licence provisions in 2004, suggesting a recent shift in operational fleet policy.

3.2.5.4 Fish landings

EU demersal trawl vessels are required to land a minimum quantity of fish into Guinea Bissau. No vessels land any fish under this requirement. All choose to make payments (€1000/tonne not landed) in lieu of fish landings at the rates indicated in Table 47. These payments have averaged €138,500 per year during the course of the current protocol. These payments are made at the time of paying the licence fees, and the payment may therefore be regarded as a licence fee premium. This premium is equivalent to 100% of the licence fee in relation to finfish licences, 52% in relation to cephalopod licence and 14% in relation to shrimp trawl.

3.2.5.5 Compliance with other provisions

There appears to a generally high degree of compliance by EU vessels with the protocol conditions, in respect of EEZ entry and departure notices, licence fee payments, annual vessel inspections, the observers payment fund, observers boarding provisions, and contracting of Guinea Bissau crew members (or payments in lieu). No problems with any of these elements were mentioned by the Guinea Bissau authorities or the EU stakeholders.

3.2.6 Guinea Bissau compliance with provisions of the Protocol

Under the amendment to the 9th Protocol the Government of GB has undertaken to review all bilateral and private agreements other than those with UEMOA states with a view to:

- Reducing fishing effort in segments which are over-exploited, particularly shrimp
- Guarantee compliance with responsible fishing and non-discriminatory provisions of Article 3 of the Protocol
- Freeze new bilateral and private agreements.

Crucially, review and re-negotiation of the non-EU agreements are required to bring the financial compensation into line with the 9th Protocol, or to terminate them. This exercise was to be completed by the 16th June 2004. In a subsequent meeting between the parties (Procès Verbal of 7/8 June 2004) it was agreed that Guinea Bissau would implement:

- 50% fishing effort reduction would be implemented in the charter fleet segment, with a maximum of 4 shrimp vessels and 3 cephalopod vessels.
- cessation of awarding fishing licences as payment in kind for goods or services received from third parties
- maintenance of national fishing effort as foreseen in the fisheries management plan of 2004.

In respect of the above conditions the following points are noted by the consultants.

- Guinea Bissau has undertaken a revision of the CONAPEMAC Agreement with a consequent 29% reduction of shrimp segment (corresponding to 4 vessels - 800 GRT), agreed between the parties in the minutes of a "*Proceso verbal*" of 13 April 2005. However, it is observed that there was a corresponding increase permitted in the demersal fish/cephalopod segment. The net number of vessels fishing has remained the same, as has the identity of the vessels. Given the practice of this segment, of targeting one species whilst fishing under a licence for another, it is by no means clear that this adjustment has resulted in any overall reduction of fishing effort applied to the shrimp fishery. Compliance with this provision appears to be on paper only.
- In terms of the compensation under the CONAPEMAC Agreement, the benefits received by Guinea Bissau are in terms of materials and investments in the sector. These include a supply of rice, refurbishment of refrigeration facilities, and a semi-industrial fisheries project (which has supplied 3 trawlers to the Ministry, but which has not made any profit). The outstanding balance in 2004 was US\$2.53 million in favour of China. When this is finally amortized, Guinea Bissau has indicated an intention to renew the Agreement only on the basis of a bilateral agreement with the Government of China.
- The FEDERPESCA agreement was renewed on 16 September 2004 for two years and is thereafter renewable for a further two years. The new protocol continues the practice of previous Protocols of not specifying any limits to fishing effort. The only major change is that only vessels affiliated to FEDERPESCA, but without a flag of an EU Member State, may now fish under this agreement. It is notable that this has prompted the re-flagging (mainly to Senegal) in 2004 of the remaining Italian flagged vessels fishing under the FEDERPESCA agreement. It is thought that the FEDERPESCA agreement, because of its essentially limit-free access, provides greater flexibility than the effort-limited EU Agreement.
- There is no monetary compensation defined in the FEDERPESCA agreement. The only apparent and direct benefit to the Government of Guinea Bissau is the licence fee payments, which are of the same order as set out in the EU Fisheries Protocol. However, FEDERPESCA also undertakes to supply three industrial trawl vessels (before April 2005) and to guarantee their management through a Guinea Bissau Company to be established by FEDERPESCA before October 2004. Until now none of these conditions have been met. Other compensation elements are "on the job training" and study tours for Guinea Bissau partners.
- Despite the limitless fishing opportunities provided, the indications are that the uptake under the FEDERPESCA agreement is being reduced in 2005, due to the lower yields and profitability of the shrimp fishery.
- Guinea Bissau claims to have frozen new bilateral and private agreements. The ITALFISH Agreement was signed for one year in May 2003, but was not renewed in 2004. Many of the other existing private charters appear to have been renewed for 2005.

It is therefore evident that, despite the best efforts of the Community to encourage a commensurate reduction of the fishing opportunities under these two agreements, the Government of Guinea Bissau has not met its responsibility to ensure an overall reduction of effort in the shrimp fishery, and it may have breached Article 3 of the Agreement in respect of discrimination in the allocation of fishing opportunities.

The condition applied to FEDERPESCA to create a Guinea Bissau enterprise to managed donated vessels could be viewed as a strategy to nationalise the benefits of the industrial fishery. On the other hand, it could be viewed as a means of circumventing the conditions imposed on foreign fisheries access as a condition of the amendment to the 9th Protocol.

3.2.7 Targeted actions

3.2.7.1 Activities undertaken

Table 52 shows the progress towards the targeted action activities as set out in the protocol along with the activities achieved and progress towards targets. It indicates that targeted action fund disbursement was variable up until the beginning of 2004. Disbursement was also severely behind schedule, with only 43% of the 2001/2002 funds disbursed by the beginning of 2004, and only an estimated 70% of these actually spent⁴².

The support actions under the 9th Protocol and the activities proposed under the *ad hoc* decision were re-programmed by the 2004 amendment to the Protocol. There is good evidence that the Targeted actions and *ad hoc* actions are now subject to a clear planning process, with the preparation by the Government of Guinea Bissau of Execution Programmes for the *ad hoc* and Targeted Action activities, and associated reporting on the results.

Formally, according to the original programme documents submitted by the Ministry of Fisheries, the activities undertaken under the *ad hoc* decision relate to points 1, 3 and 4 in Table 52, whilst activities 1 to 5 were undertaken under the targeted action programme. Since the amendment the programmes have essentially been merged into a single fund and the distinction is academic.

Although implementation has at times been hampered by logistical limitations resulting in delays, it is evident that no material problems are now evident in the programme of actions under the targeted actions funds and the *Ad Hoc* decision.

⁴² “Relatorio de execucao e justificativos de açoes especificas do primeiro ano (2001/2002): Periodo de execucao de Janeiro 2003 á Janeiro 2004, Ministério das Pesca da Republica de Guinea Bissau, Janeiro 2004”

Table 52 : Targeted Actions and under the 2001/2006 protocol¹

Targeted action described in formal report	Jan 2004 disbursement of 2001/2002 funds	Consultants Observation on Progress
1. Finance for Scientific Programme (CIPA) for scientific research and the improvement of health and hygiene conditions.	73%	<p>During the present Agreement two research cruises were implemented using TA funds</p> <p>2002 (October) – Cruise of the vessel B/O “Vizconde de Eza” (Spanish Institute of Oceanography)</p> <p>2004 (June – July) - Cruise of the vessel N/O AL-AWAM (Institut Mauritanien de Recherches Océanographiques et des Pêches)</p> <p>Support for processing of statistical catch data treatment and respective publication.</p> <p>Survey of artisanal fisheries.</p> <p>In respect to Quality Control laboratory refurbishment of the laboratory building and acquisition of equipment totalling around €350.000</p> <p>Repair of vehicles and supply of consumables</p>
2. Training support for the MoF	32%	<p>No scholarships have been implemented to date. A list of candidates was prepared in 2001, then cancelled by the new government and with agreement of the EC Delegation and Minister of Fisheries.</p> <p>Some local training was implemented and presence of staff of Ministry of Fisheries in international meetings supported.</p>
3. Support for investments in Artisanal fisheries	35%	<p>Refurbishment of some landing sites and supply of equipment was undertaken at artisanal fisheries centres.</p> <p>Also some activities were supported for control and monitoring of artisanal fisheries;</p> <p>Support for the artisanal post harvest activities of Bijagós communities.</p>

Targeted action described in formal report	Jan 2004 disbursement of 2001/2002 funds	Consultants Observation on Progress
4. Support for fisheries surveillance (equipment, administrative costs and monitoring measures in conjunction with other countries and organisations) including the possibility of establishing a satellite VMS system.	25%	The supply of 2 surveillance vessels is to be supported under the Protocol, with an estimated cost of €1.402.951. This amount is held by the Commission (in agreement with GB Government) pending the launch of a supply tender in due course.
5. Institutional Support (Ministry of Fisheries)	50%	Refurbishment of DGPA buildings and equipment to improve operation and data of licensing department. Registration system for fishermen and vessels
6. TA for all the above	100%	Implementation of the Specific Convention under which Technical Assistance was delivered in April and May 2005, to the Guinea Bissau Ministry of Fisheries in relation to strengthening Fisheries Monitoring Control and Surveillance and improving the fisheries legislation. Draft final reports pending comment and approval of the Commission.

¹ including activities funded under the ad hoc decision

3.2.8 *Assessment of the financial budgetary structure for utilising Community funds.*

3.2.8.1 *Summarises the financial transfers received by the Government of GB under the 9th protocol Financial disbursements under the 9th Protocol and its amendment*

Table 53 summarises the financial transfers received by the Government of GB under the 9th protocol and its amendment, including the payments under the *Ad Hoc* decision, and receipts from vessel owners for licence fees, observer fees, and compensation paid by vessel owners for seaman not signed as crew. During the first four years the 9th protocol has generated an estimated €45.2 million in favour of the Government of Guinea Bissau, expected to rise to at least €56.8 million by the end of the protocol in 2006 (assuming full disbursement of the remaining targeted action/ad hoc funds).. The last payment of the financial compensation was brought forward, and paid in June 2005, as a means of providing interim support during the critical election period. Remaining payments foreseen are for the final year targeted actions (about €1,402,951.00⁴³) and the balance of the Ad Hoc Decision €1,250,000). Of this total received, an average of 84% will have been provided by the Community and 16% by vessel owners.

⁴³ being the cost of two surveillance vessels, currently withheld by the Commission with the agreement of the GB authorities, pending procurement in 2005/2006.

Table 53 : Fishing revenues from EU agreement

	2001/2002	2002/2003	2003/2004	2004/2005	2005/2006 (forseen)	TOTAL
Licences (1)	1,352,401.53	1,532,601.06	1,851,642.62	2,113,472.47	991,513.62	7,841,631.30
Observers and seamen not signed	39,627.52	59,554.61	70,232.57	78,307.78	31,641.14	279,363.62
Flat-rate payments	87,421.66	138,034.56	190,880.89	199,364.56	76,534.26	692,235.93
Sub-Total Vessel Contributions	1,479,450.71	1,730,190.23	2,112,756.08	2,391,144.81	1,099,689.02	8,813,230.85
Financial compensation (2)	9,000,000	9,000,000	9,000,000	7,260,000	7,260,000	41,520,000
Targeted actions				1,782,655	3,250,000	5,032,655
Ad hoc (3)	1,467,345					1,467,345
Community contribution	10,467,345	9,000,000	9,000,000	9,042,655	10,510,000	48,020,000
TOTAL	11,946,796	10,730,190	11,112,756	11,433,800	11,609,689	56,833,231
% Community	88%	84%	81%	79%	91%	84%

(1) DGP (Direcção Geral de Pesca Industrial), up to 17.05.2005

(2) FPA (249/2002, 829/2004)

(3) Ad Hoc decision (2001/179/EC)

3.2.8.2 Destination accounts and payment procedure

3.2.8.2.1 Payments for support measures

In the early part of the Protocol problems were encountered with accountability for targeted action payments. The amendment to the 9th Protocol established that the Government of Guinea Bissau should *"transfer irrevocably to a joint-signature account administered by the secretariat of state for fisheries and the European Commission delegation in Bissau, by 15 October 2003, the amounts yet to be implemented under the first instalment of the Council Decision of 26 February 2001"*⁴⁴. This amount, being the unaccounted outstanding balance from the ad hoc decisions, was determined as €1,782,655.

The amendment added that "Future transfers relating to the support measures in the fisheries sector shall be made by the European Commission directly to this account". Thus a separate account was opened for the transfer of payments for targeted actions and the balance of measures under the *ad hoc* decision.

This account is held at the Banco Africa Occidental (RGB/CE No 1/006492/01.0018), with five subsidiary accounts, being one for each beneficiary Directorate of the Ministry together with Ministry of Fisheries and the Treasury. The joint signatures are those of the Minister of Fisheries and the Head of the European Delegation in Bissau. The effect of the measure has been an immediate improvement in the control the agreement funds, with payments only made against invoices for actions which contribute to the approved programme. Another beneficial outcome of this arrangement is that the funds cannot be retained by the Treasury, which has happened in the past and stifled Ministry of Fisheries programme implementation. All parties (the Minister, the Delegation and the Commission) report satisfaction with the operation of the system. Although there are no data, the parties report that the disbursement rate has also accelerated since the amendment.

The programmes and activities of CIPA, PESCARTE and FISCAP are by and large funded by funds derived almost exclusively from the support measure funds allocated under the EU FPAs. These funds are not presented in the State budget. These funds have risen in importance over the past six years, in parallel with a continued decrease in treasury allocations. As a result the functional viability of the Ministry of Fisheries is almost completely dependent on these measures under the Protocol.

3.2.8.2.2 Payment of the financial contribution

As stated in the 9th Protocol amendment "The financial compensation (€ 7260 000 per year) will be paid into an account to be indicated by the Guinea-Bissau authorities and opened with the Public Treasury. The Government of Guinea-Bissau is solely responsible for the use to which this financial compensation is put".

Transfers of the financial contribution paid by the EC are registered on the Treasury (General Directorate) Account Number 305 1000 5017 at BCEAO Bank. The income is allowed for within the state budget. This is in accordance with the principle that all revenues should be received by the Treasury. This compensation simply becomes a financial revenue and represents about 40% of the total revenues (and in principle total expenditures) of the state. The only obligation for the Treasury is to inform DGO (budget) when and how much has been paid. At the time of this mission, the Guinea-Bissau Government was planning to launch the IMF Staff monitored programme (to be signed in April of 2005), in a bid to start providing a sound management framework for public finances.

3.2.8.2.3 Licence and other fees

Licence and other fees by vessel owners (e.g. observer costs, payments in lieu of landings and non-hire of crew penalties) paid are generally directly paid into Treasury. According to the fisheries law, 30% of the licence and observer fee monies are supposed to be returned from the Treasury to the Ministry of Fisheries. This is earmarked to fund observer programme costs. It is reported that Government repeatedly

⁴⁴ In fact the provisional agreement and undertaking to implement this transfer was made in the form of an Exchange of Letters between the Guinea Bissau authorities and the Commission, dated 29.4.2004.

sequestered these funds in order to cover expenditures not related to the fisheries sector, and thus hampered the proper functioning of the observer programme. With the opening of a dedicated treasury fishery account in 2005, Government has signalled its intention to curb the malpractice of using FGRH funds for uses other than the observer programme. However, there was no evidence of any action on this intention.

In relation to the CONAPEMA Agreement there has been a long-standing practice to issue licences as counterpart for debts. In 2004, of a total projected income of licence emissions, FGRH and non-landing indemnities, amounting to a total of €5,218,436.49, 39% were discounted against debts and other services rendered by foreign partners such as China. Examples include the rehabilitation of run-down government infrastructures (i.e. former processing plants, etc.). In 2004, the consultants estimate that €2,053,803.57 thus directly bypassed the Treasury. In 2005, this practice had been curbed substantially, with only the Chinese fleet still having all of its licence fees, observer and non-landing payments discounted against existing debts. It is the stated aim of the Government to cease this practice within the shortest possible time frame, but there remains US\$2-3 Million of debt still to discount in this manner.

The Treaty establishing the AGC with Senegal also provides that a proportion of fisheries revenues received by the Government are forwarded to the AGC. As far as could be ascertained, this provision is not implemented.

3.2.8.2.4 Income from fines

The law prescribes an allocation in the share of fines between a number of State organs, amongst which are the law enforcement personnel, the Ministry of Fisheries, the Ministry of Defence, and the Treasury. Fifty five percent of all fine proceeds are meant to flow into the Treasury, while 30% should be accounted for as direct income to the Ministry of Fisheries.

In practice this has never been applied. A number of separate sources alleged that up to 2003 under the regime of Kumba Yala, most proceeds were transferred from the transgressor into private accounts (instead of Treasury accounts), and then disappeared. During this mission, the Receipts Department of the Treasury refused to provide official account listings of fines proceeds, while listings of licensing, FGRH and non-landing indemnity payments for 2004 and 2005 were made available. However, it is thought that the worst of the abuses have now ceased.

3.3 STAKEHOLDER ASPIRATIONS

Table 54 : Guinea Bissau Stakeholder Aspirations and Issues

Aspirations	Concerns
Government of Guinea Bissau	
Renewal of the Agreement Increase in national benefits derived from the Agreement	<ol style="list-style-type: none"> 1. Maintaining level of fishing opportunities in the Agreement at a level to ensure compensation payments contributions to the national treasury 2. Strengthened fisheries policy framework and implementation to achieve sustainable utilisation of fishery resources 3. Compliance with EU sanitary norms as a means of promoting investment in shore based processing industry 4. Increase income through licensing of foreign small scale fishers 5. Need to eliminate or control IUU industrial fishing by mainly African and Asian flagged vessels 6. Need for clarification of tonnage (GRT / GT) declared by Italian and Federpesca vessels 7. Problems with Korean vessels in respect to vessel identification (need to access international registry) and continual level of infractions which have led to cancellation of fishing licences
Small scale fishers and processors	
	<ol style="list-style-type: none"> 1. Elimination or control of IUU fishing by foreign small scale fishers from 2. Improving access to supplies of fishery products from processing and distribution, especially by-catch from industrial demersal trawl vessels 3. Sustainable use of mangrove resources
National Charter	
Maintaining access to the industrial fishery on favourable terms	<ol style="list-style-type: none"> 1. Developing access to EU markets by compliance with EU sanitary norms 2. Improved national participation in industrial fisheries

Table 55 : Other foreign stakeholder Aspirations and Issues

Aspirations	Concerns
Italian Interest Group FEDERPESCA	
Continuation of the FEDERPESCA agreement for Italian vessel owners operating with African flagged vessels	<ol style="list-style-type: none"> 1. Need to eliminate IUU fishing 2. Maintain or increase share of national fishing opportunities under the existing agreement and possible extension 3. By-catch limits are considered to be unrealistically low
Chinese Interest Group CONAPEMAC	
Continuation of the fisheries access rights	<ol style="list-style-type: none"> 1. Replacement of the agreement with an access Agreement with the Government of China 2. Need to reduce the total number of vessels (to c. half of present numbers) 3. Implementation of an effective MCS and effort to avoid illegal fishing; 4. Undertake a study of the actual resource situation (stock status, etc) 5. Need to determine adequate biological rest periods
Senegalese small scale fishers	
No data	No data
Various foreign Joint Ventures	
No data	No data

Table 56 : Community Stakeholder Aspirations and Issues

Aspirations	Concerns
Spanish cephalopod trawl operators	
Interested in renewal of the agreement and continuation of fisheries access on current terms	<ol style="list-style-type: none"> 1. Yields are satisfactory, but the need for an overall reduction in fishing effort is recognized. 2. Proposes a stronger EC position on GB with respect to other agreements settled after the EU/GB protocol, with subsequent devaluation of opportunities due to overall increase of fishing effort. This should be reflected in conditions for renewal or compensation value. 3. Need for improved control of industrial fishing in 12 mile zone; 4. Need for improved control of activity of foreign small-scale fishers.
Italian flagged shrimp Fleet	
Interested in continuation of the fisheries access under the EU agreement	<ol style="list-style-type: none"> 1. Maintain or increase share of national fishing opportunities 2. Need to eliminate IUU fishing 3. By-catch limits are considered to be unrealistically low. A greater proportion of fish and cephalopod should be permitted for retention on board.
Portuguese shrimp trawl fleet	
Interest in principle in continuation of the Agreement.	<ol style="list-style-type: none"> 1. Zero profitability of vessels in 2004, due to declining shrimp catches rate. Several vessels to be transferred to other fisheries (Mozambique). 2. Recognise need for reduction of fishing effort and the introduction of biological rest periods 3. Fisheries management should focus on IUU fishing, reduction of private licences and control of foreign small-scale fishing 4. EC should intervene more to support for MCS and research/fisheries management activities
Spanish and French Purse seine fleet	
Renewal of the agreement on current terms	None, given the relatively minor importance of this Agreement to these stakeholders.
Spanish shrimp trawl fleet	
Assumed interested in continuation of the fisheries access under the EU agreement	No data ⁴⁵
Greek cephalopod trawl operators	

⁴⁵ The Asociación Nacional de Armadores de Buques Congeladores de Pesca de Mariscos (ANAMAR) was invited to contribute views for this section but declined to respond

Aspirations	Concerns
Assumed interested in continuation of the fisheries access under the EU agreement	No data
Spanish pole and line fleet	
No data	Assumed none, given the relatively minor importance of this Agreement to these stakeholders.
Surface long line fleet	
No data	Assumed none, given the relatively minor importance of this Agreement to these stakeholders.
European Commission	
Continued access for EU vessels, fishing in a responsible and sustainable manner, generating high quality products for the EU market while delivering sustainable development benefits to Guinea Bissau	Difficulty of monitoring fishing activities Weak policy framework and implementation Historically weak financial management of compensation and licence payments In effective MCS and legal framework High level of IUU fishing Overexploitation of key stocks central to the Agreement Lack of scientific advice for management
EU processors and marketers	
Continued and reliable supply of product of good quality at competitive prices	Disincentive to invest in onshore facilities for processing high value fish from artisanal fisheries due to lack of compliance with sanitary norms and unstable investment climate Market competition from farmed warm water shrimps from SE ASia
EU consumers	
Continued and reliable supply of product of good quality at competitive prices	Concern over sustainability of resource and environmental impacts

3.4 CONTEXT AND INTEREST IN THE FPA

3.4.1 Interest in an FPA

In recent years, Guinea Bissau has been plagued by political instability and occasional violent conflict. In 1998 and 1999 a civil war caused widespread dissolution of order and significant flight of human and financial capital. A military *coup d'etat* in September 2004 has since jeopardised the return to democratic conditions. Throughout this entire period the financial compensation provided under the EU-Guinea Bissau Fisheries Agreement has contributed significantly towards maintaining stability, by ensuring prompt payment of wages, at a time when the country was, for all intents and purposes perpetually on the brink of bankruptcy. Overall, it is estimated that the EU-Guinea Bissau Fisheries partnership agreement has contributed 38% of government revenues in the last 5 years.

Furthermore, in the absence of other instruments for support, the Community has responded by employing the financial contributions under the FPA in a flexible manner in the partner country's favour, for example replacing income lost by the temporary suspension of the agreement in 1998/99 with an *ad hoc* compensation payment in 2001, and by bringing forward compensation payments in 2005, to ensure financial liquidity of the interim Government during a critical election period. It is not over-dramatising the situation to consider that the FPA has helped to prevent further conflict more than any other external instrument, without which the country would have been likely to revert to the civil strife experiences of the recent past. It is therefore clear that the FPA with the Community has been, and continues to be, very much in the interest of the partner country.

As a result of the 2004 coup, Guinea Bissau was held by the Community to be in breach of Article 3 of the Cotonou Agreement. However since that time, the Community and Guinea Bissau have agreed on a course of actions under Article 96 of the Cotonou Agreement. This has paved the way for the Community to re-orientate the National Indicative Programme to budgetary support (away from a previous focus on roads and bridges). In 2005, the budgetary support delivered under the 9th EDF will amount to an estimated €9.2 million. Guarantees on improvements in governance are to be delivered by the IMF staff Moderated Programme. Thus, although the national budget of the country is expected to be less dependent on the FPA in the future, it is clear that the EU-Guinea Bissau Fisheries Agreement will continue to provide a crucial pillar of the State. There is clear political interest, on the part of the Government of Guinea Bissau and the Community, not only in ensuring the continuation of the Agreement, but also that its value to the Partner country is maximised.

3.4.2 *SWOT Analysis of the Fishery Sector*

The following table illustrates the strengths, weaknesses, opportunities and threats facing the Guinea Bissau fishery sector.

Table 57 : Strengths, weaknesses, opportunities and threats facing the Guinea Bissau fishery sector

<i>Strengths</i>	<i>Weaknesses</i>	<i>Opportunities</i>	<i>Threats</i>
Resources and environmental considerations			
Highly Productive ecosystem with extensive continental shelf fishery	Lack of appropriate stock surveys and absence of data on most stocks except tuna and swordfish	Development of small pelagic fisheries	Excessive development of fishing effort on cephalopod and crustacean stocks may cause long term negative changes to the demersal fisheries.
Diverse range of stocks of commercial interest including demersal, crustacean, cephalopods, tuna and small pelagic fish	Lack of specific data on by-catch of demersal trawlers undermines effective management	Effective fisheries management will improve yields and economic rent to the country	Regional depletion and/or extinction of turtles (by-catch in long line and trawl), sharks (targeted long line and artisanal fishery); high by-catch and discard rates permanently alter benthic ecosystem in trawlable areas
			Mangroves habitat loss (fuel for artisanal fish processing) with impacts on artisanal and industrial fish and shrimp fisheries and biodiversity.
Institutional framework			
Institutional basis for fisheries administration exists within MP.	Lack of qualified and fisheries research personnel	Strengthened fisheries administration will improve national benefits derived from the fishery sector through improved productivity and yields	National benefits derived from the fishery continue to decline due to continuing political instability and lack of fisheries resource management capacity.
Fisheries recognized as one of the most important sources of the state budget by the government and/or international donors.	No fisheries statistical database (software or treatment) and research capability nor resulting management measures.	Proper structure of financial incentives for surveillance agents will reduce vulnerability to corruption and improve enforcement	Low government salaries and long payment delays and lax financial controls and accountability continue to undermine institutional basis for management (high staff turnover, corruption, low morale)
Adequate basis and level of qualified	Competent Authority for sanitary controls not recognised by EU	Introduction of EU-compliant sanitary control will promote export-led	Weak governance will not allow the country to benefit from debt relief

Strengths	Weaknesses	Opportunities	Threats
fisheries administration staff		investment and development, benefiting the small scale sector.	
	Unqualified corps of observers to carry out proper data statistical and/or scientific data collection		
	Weak MCS and enforcement capacity in EEZ		
Legal and Institutional Framework			
Fisheries legal framework of GB is in general in line with international commitments of the country.	Weak legal basis for MCS system; Weak fisheries management plan. Weak log-book, catch declarations and compliance procedures. Lack of policy formation mechanisms. No policy measures directed at small scale sector	Modern Fisheries Law (FL) in will improve capacity for conservation. management and environmental impacts;	Political instability continues to prevent improved strengthening of fisheries policy and implementation
Jurisdictional dispute with Senegal resolved by the formation of the AGC for joint administration.	Minister's discretionary powers excessive, allowing cancellation of penalties and sanctions without transparent procedure		Lack of governance in civil and criminal jurisprudence will undermine legal reforms of the fishery sector
	Fisheries management responsibilities of the AGC not clear.		
	Overlap between the scopes of the two regulations on artisanal fishing activities resulting in inconsistencies and implementation difficulties		
	Loopholes and inconsistencies and unregulated aspects of the fisheries legislation undermine legal implementation and enforcement. Inconsistency in by-catch rules applied to national vessels and foreign fishing vessels.		

<i>Strengths</i>	<i>Weaknesses</i>	<i>Opportunities</i>	<i>Threats</i>
Fisheries operations			
High level of employment in foreign fishing vessels (including crew members and observers)	Weak fisheries culture in local communities of fishing; Strong pattern of fisheries subsistence; High incidence of mixed fisheries/ agricultural people; significant presence of foreign small scale fishers.	Supplementary supplies and income to the national sector from by-catch from foreign industrial fishers	Significant loss of government revenue due to reduction or withdrawal of EU FPA due to declining viability of the industrial trawl fishery.
Good range and abundance of species with international demand provides incentives for EU and other international stakeholders in GB	Artisanal sector undercapitalised due to lack of viable market, resulting lack of input supplies	Extension of semi-industrial fisheries and small scale fishery to access demersal and pelagic resources, providing incomes and food security	Continued lack of investment and stagnation due to political instability inadequate management and lack of access to international markets
	Lack of access to international markets limits financial inputs for development.	Access to export markets provides financial incentives for investment in small scale fishery and processing	
	No established links between national fishery sector and foreign fishing fleets		
	Weak environment for private sector investment due to political instability, and dysfunctional tax and legal systems.		
	Lack of infrastructure for fish landing and vessel services (for both small scale and foreign fleets)		
	High level of IUU fishing and breaches of mesh-sizes regulations in industrial fishing incidence undermines regulation of lawful fishing		

<i>Strengths</i>	<i>Weaknesses</i>	<i>Opportunities</i>	<i>Threats</i>
Marketing and processing			
Good range of species with high demand on international markets (EU and Regional)	Lack of compliance with sanitary controls prevents access to international markets	Improved sanitary controls will open export markets and sources of finance for development	Continued lack of investment and stagnation due to political instability inadequate management and lack of access to international markets
Well established regional and international markets with strong demand	Poor condition of national infrastructure (landing sites, roads, ice supply, cold storage) limits development of internal and external markets.	Increased incomes from oil revenues will provide funds for new distribution infrastructure and stimulate national demand and prices to fishers.	
	Weak local market demand (with no weighing, species or quality differentials in prices).	Development of new national processing and market systems for fish distribution will improve food security and nutrition	
	Trade and value added from commercial small scale fisheries is in the hands of foreign (Senegalese and Guinea Conakry) operators		
	Government involvement in the fish market with statutory fixed prices for industrial fishery by-catch.		
	National and regional distribution dependent on limited resources of fuel wood and mangroves for smoke-drying		

3.5 EX POST EVALUATION

3.5.1 Effectiveness

What has been the contribution from the Agreement to the activities of Community fishery sector?

The 2001/2005 EU/ Guinea Bissau FPA has been effective in providing fishing opportunities that permit the deployment of an annual average of 33 shrimp trawlers (on average 80% dependent on the agreement) and 9 cephalopod/fish trawlers (60% dependency). In addition, the opportunities have been utilised by an average of 27 tuna seiners and 9 pole and line. However, these pelagic vessels also fish substantially in other EEZs and in international waters, and the level of dependency on this specific fishing activity is low, being 0.6% in the case of the purse seine fleet and 1.6% in the case of the pole and line vessels. In these sectors, the FPA can be regarded as less effective, although it does serve to support the Community's fishing activities in regional waters. The utilisation of the surface long-line opportunities has been negligible, and in this sector the Agreement is ineffective. The combined sector average annual value added resulting from the 9th Protocol is estimated at M€39.7. The direct benefits resulting from EU uptake of quota in the GB EEZ averaged M€13.2 m/year. Value-added benefits to fishers make up 33% of the total, downstream benefits, 60% and upstream benefits, the remaining 7%. Eighty per cent of the Community value of the Agreement is derived from the shrimp sector. However, the downstream benefits of M€21 probably represent an overestimation, since most shrimp is packed for retail sale onboard and undergoes limited additional processing and handling.

What has been the contribution from the Agreement to employment of Community fishers?

The Agreement has annually supported an estimated FTE equivalent 509 community jobs, evenly distributed between fishing, up- and down-stream activities. About 80% of these are related to the shrimp fishery, and 19% to the cephalopod fishery. Only 9 jobs are related to the tuna sector. The Community jobs attributed to the Agreement contribute to regional fisheries dependency in Vigo, Las Palmas and Huelva (Spain) and Aveiro (Portugal).

What effect has the Agreement with Guinea Bissau had on the stabilisation of the Community market?

Supplies to the EU fishery sector from the GB FPA averaged 8,476 tonnes/year during the course of the 9th Protocol, valued at €36 million. About 5,800 tonnes of this (valued at €29 million) was shrimp, destined for the Spanish, Portuguese and Italian markets. This contributed about 1% of the EU shrimp market. About 2000 tonnes, valued at €6.5 million comprised cephalopods, about 75% of which was sold into the Spanish market, and the balance exported to Japan. Supplies to tuna processing were rather limited at under 700 tonnes, which entered the EU or Senegalese processors prior to distribution to the EU market. Overall impact of supplies to the Community market is limited. However, it should be noted that the EU market is also supplied with fishery products of Guinea Bissau origin, caught by non-EU flagged vessels under EU beneficial ownership. The quantities are not known.

What impact has the Agreement had on development of the Guinea Bissau fishery sector?

- The Community's activities are mainly confined to offshore fisheries, and vessels rarely if ever enter a Guinea Bissau port. There has been no development of shore based service facilities as a result of the Agreement. A limited development of agency services has been the only impact.
- The investment in onshore downstream facilities to receive, process and market catch has been handicapped by the lack of a stable investment climate for business, and the non-compliance with EU sanitary requirements for fishery products. In this respect also the Agreement has had little impact on the fishery sector.
- Although an estimated 141 fishers and observers are employed on vessels fishing under the Agreement, there is no resulting professional development or transfer of skills beneficial to the fishery sector.
- The Community will have contributed €9.75 million over 5 years (comprising the ad hoc decision and the support measures under the amended protocol) towards measures in favour of the GB fisheries sector. This has provided investment and operating costs for a range of important measures related to strengthening fisheries institutions, improved fish export controls, fisheries research, fisheries MCS activities, small-scale fisheries and training. These have had a major impact on the functioning of the fisheries administration, by providing the majority of the operational funding for key activities such as research cruises, MCS and

statistical analysis. However, efficient use of these funds has been compromised by the lack of a clear policy framework for fisheries.

- Nevertheless, the Agreement has contributed significantly to political stability, to the benefit of the fishery as well as sectors of the economy.

How does an Agreement with Guinea Bissau contribute to the development of responsible fisheries?

- The Agreement makes provision for adjustment of fishing opportunities based on scientific evidence with an appropriate adjustment of the financial compensation. The amendment to the Protocol for the period 2004 to 2006 has been successful in adjusting EU fishing opportunities in the shrimp sector, reflecting concern over the condition of this resource and loss of viability.
- However, the practical application of the non-discriminatory principle expressed in the Agreement has not resulted in a proportionate reduction by all fleet segments with access to the fishery. The Government of Guinea Bissau has not applied this principle in the re-negotiation of other (non-EU) access arrangements. In this respect the Agreement has not succeeded in contributing towards the promotion of responsible fisheries.
- Implementation of the support measures in favour of Guinea Bissau fishery sector has funded demersal research cruises and strengthened the fisheries MCS capacity. A parallel technical assistance intervention funded by the Commission has supported the drafting of a new fisheries law and development of short- and long-term MCS plans. The presence of the Agreement is contributing directly to a significant improvement in responsible fisheries, but more support will be required before operational effectiveness in fisheries management can be delivered.
- Furthermore there is a failure on the part of the EU demersal trawl fleet to properly complete catch declarations and communicate them to the GB authorities, as required by the Agreement. There is evidence of non-declaration and under-declaration of catches from this sector. The GB authorities have failed to act against vessels that have not complied with this requirement. Given the critical need for information for management purposes (shrimp stock condition, by-catch of fish and interactions with turtles) this continuing omission in the management of the FPA, represents a failure in the commitment to responsible fisheries.
- The observer programme is undermined by the low educational status of the observers and the conflict of interest created by the uptake of additional paid employment onboard. The result is observer data that is unreliable, thus undermining responsible fisheries management of the

activities under the Agreement (and under other non-EU FPA access arrangements).

Do the conditions of utilisation as outlined for the financial arrangements favour the development of the Guinea Bissau fishery sector?

- The Guinea Bissau Government benefits from the fisheries compensation, which provides a significant proportion (38%) of revenues for the national budget.
- Since the dual signature amendment to the disbursement procedure, the support measures have provided a sustainable and transparent basis for the delivery of positive developmental benefits to the sector
- However, the lack of an effective national policy framework for fisheries severely limits the potential for the partner country to benefit from the support measures under the Agreement. An undertaking by the Guinea Bissau authorities to implement a policy study and prepare a comprehensive policy document has not been met.
- Meanwhile, technical assistance in fisheries legislation and MCS planning has been provided by the Community, as a means of ensuring improved functionality of the Agreement. There has been insufficient time for the impacts of this to have felt, but the activity is likely to contribute towards sustainable development of the sector in the future..

3.5.2 Efficiency

Is the cost of the Agreement negotiated of advantage to the EC?

- The average annual cost to the Community over the course of the first four years of the 9th protocol is €10.7 million, of which €8.6 million is related to the financial contribution (compensation and support measures). In return the FA has generated an average annual Community value added (direct and indirect) of €39.7 million, and supplies of fish valued at €36.1 million to the EU market. An estimated 509 Community jobs are sustained by the FPA, which appears to be advantageous to the EU fishery sector.
- The average financial contribution of €8.6 million generated revenues estimated at €36 million at first sale over the course of the protocol. However, due to the decline in shrimp prices, sales revenues declined to an estimated €27 million in 2004, suggesting reduction in efficiency of

the Agreement over the course of the Protocol.

- Considering the total payments over the period of the 9th Protocol, including the support measures allocation, for the period 2001-2004, for every €1 spent by the EC, the benefit is estimated to be €3.74. These benefits include value-added to the EC catching sector (profits and wages) and some added upstream (suppliers) and downstream benefits (processing).
- Based on value for money, the conclusion is that for the years 2001-2004, the Community has paid less than the total direct and indirect value-added benefits accumulating to the Community fishery sector (including up- and down-stream activities). However, this conclusion is moderated by two factors. Firstly, the level of confidence that can be applied to the up- and down-stream multipliers is such that these value estimates may be excessive. Secondly, there has been a notable fall in the price of shrimp and a rise in fuel costs during the last year of the Protocol. As a result, in 2004, the cost benefit ratio has fallen to 2.45.
- Under the GB FPA the Community supports the costs of fisheries access, to the benefit of the EU fishery sector. The fisheries access opportunities in the shrimp segment are only utilised to the order of 36% overall, with a lower rate of utilisation (30%) by the Spanish and Portuguese trawlers in 2003/2004. On the other hand, uptake by Italian vessel owners increased over the first 3 years of the Protocol to nearly 70%. Indications are that the uptake has continued to decline in 2005 with the withdrawal of some vessels from the fishery.
- Fish/cephalopod trawl utilisation averaged 70% over the first three years of the protocol, utilised mainly by Spain and Italy. Greek trawler owners did not take up licences in 2003/2004.
- The take up rate of the licences was maintained at a regular high level for the tuna purse seine fleet, drawn by both French and Spanish vessels, averaging 74% during the first three years of the Protocol. However only 43% of the pole and line fishing opportunities were drawn. France had a high rate of utilisation (80%) but Portugal has not used any of the opportunities allocated. The low rate of utilisation gives rise to low efficiency in terms of licence fees – which are equal to 100% of catch value in the case of tuna seiners, suggesting that the catch reference quantities are set too high for the maximum utility of this fishery.
- Surface long-line fishing opportunities are hardly utilised at all. Only one licence was issued in 2002/03, and 2 in 2003/04 (all to Spanish vessels). No surface long-line opportunity has ever been taken up during the course of this agreement by Portugal or France.
- EU vessel owners contribute licence fees in proportion to the level of fishing effort applied (or in the case of tuna in relation to the catches made). This contributes to the cost of the compensation paid by the Community for the fishing opportunities provided. The fleet contribution (including observer costs) amounts to 4% of catch value at first sale in the case of

the trawl fisheries and 14 % in the case of the tuna purse seiners and 5% for the pole and line vessels.

What are the advantages from the Agreement to the Community fleet?

- The Agreement has sustained traditional fishing opportunities for European distant water interests. Without the Agreement, the fishing opportunities for approximately 33 shrimp and 9 cephalopod vessels would have been severely constrained, and the viability of the vessels compromised.
- Furthermore, the Agreement complements the regional fishing strategies of EU tuna vessels (27 purse seine and 9 pole and line vessels) as indicated by the continuing licence uptake in the absence of significant yields from this segment. However, levels of dependency of these fleet segments have been low, and the fleet could survive the loss of access under the Agreement. The Agreement delivers no significant advantages to nominal beneficiaries in the EU surface long-line fleet, nor to Portuguese pole and line vessels.
-

What are the advantages from the Agreement to Community fishers?

- The Agreement supports fishing companies and jobs in the traditional fishing and fish processing communities of Vigo, Huelva and Las Palmas (ESP), Aveiro (PT), Concarneau (FR), Bari and San Benedetto del Tronto (IT).

What are the advantages from the Agreement to the partner country?

- On a macro-economic level the national GDP of Guinea-Bissau in 2004 is estimated to be US\$ 280 millions⁴⁶. Recent estimates of fisheries sector GDP range between 7-10%⁴⁷ (2002), suggesting that in 2004 fisheries contributed some US\$20-28 millions to GDP. The contribution of the FPA between RGB and EU, in the form of compensation, licence fees and target actions, therefore accounts for some 4.7% of the national GDP and up to 65% of the

⁴⁶ World Development Indicators database, World Bank, 15 July 2005

⁴⁷ Joint FAO/World Bank Fisheries Sector Memorandum, June 2003

fisheries sector contribution to GDP. The financial compensation from the FPA is not applied specifically to the fishery sector, and as a rent is considered to produce no additional added value.

- The benefits to Guinea Bissau from the FA, in the form of compensation, licence fees and limited crew employment accounts for €10.7m per annum, being about 30% of the annual first sale value (€36 million) of the fishery products generated by the Agreement, or €4,262/tonne. This benefit level compares with the 67% in Angola Agreement, 35% in the Cape Verde and 17% in the São Tomé and Príncipe Agreement.
- As a result of the absence of vessel supply services, landings, shore based processing, greater levels of employment in fishing and up- and downstream activities, almost all the fisheries activity added-value generated by the FPA falls outside Guinea Bissau, which does not gain any such advantages from the Agreement.

3.5.3 Relevance and Strategic issues

Does the Agreement with Guinea Bissau satisfy the various needs of the different interest groups in the Community?

- Security of access provided by the Agreement creates a basis for the continued viability for some of the EU distant water fisheries, particularly demersal trawl operators.
- However, the interests of these owners are prejudiced by the actions of the Guinea Bissau Government and owners of vessels fishing under other access arrangements. The terms of the amended Protocol required that EU flagged vessels be prohibited from operating in Guinea Bissau under access arrangements other than the EU-GB FPA. Rather than bringing the operation of such vessels within the Agreement, the effect of the measure has been to cause the European beneficial owners to re-flag these vessels. The Government of GB has allowed the negotiation new access arrangements for these vessels via the EU interest Group FEDERPESCA.
- Furthermore, conditions relating to the principle of non-discrimination set out in Article 3 of the Protocol have been undermined by the renegotiation of FEDERPESCA and CONAPEMAC Agreements, both renegotiated since the 2004 Amendment to the 9th Protocol, with *de facto* zero reduction in fishing opportunities in the case of the former, and limitless opportunities in the case of the latter, and both without financial compensation.
- The licence utilisation pattern suggests that the FPA exceeds the requirements of the EU fishery sector in terms of surface long-liners. The FPA appears to provide more fishing opportunities than are currently demanded by this segment of the EU fishing fleet.
- The licence opportunities provided by the Agreement for tuna purse seiners and pole and line vessels are taken up. Although neither fleet has exhibited high levels of dependency in terms of actual fishing patterns, it is clear that the access provided is commensurate with the regional fishing strategies pursued by these segments.

Does the Agreement with Guinea Bissau satisfy the various needs of the different interest groups in the partner country?

- The FPA is successful in increasing the economic rent achieved by Guinea Bissau. Given the structural inadequacies of the Guinea Bissau fishery sector, the rent is significantly higher than it would be were there to be no Agreement, under current conditions. The terms are significantly more favourable than other access arrangements that the partner country is able to negotiate. Guinea Bissau does not have the capacity to exploit these fisheries on its own account.
- However, the Agreement has not been successful in promoting the increased participation of the partner country in the fishery sector, largely because of the unstable political situation and lack of governance.
- As a result the Agreement has had no significant impact on the GB fishery sector, neither on employment nor supplies to market. Whilst fish is important for national food security, the contribution of the Agreement to this is nil.

3.5.4 Sustainability

Does the Agreement with Guinea Bissau assure the viability of Community fishers?

The FPA contributes towards the continued viability of the Spanish, Italian, French, Portuguese, and Greek distant water fishers in demersal trawl and tuna sectors. The loss of the Agreement would jeopardise the existence of significant elements of the demersal trawl fleets in Spain, Portugal and Italy, but other segments/nationalities would be unlikely to be severely affected.

Does the Agreement with Guinea Bissau ensure the viability of the fishery sector in Guinea Bissau?

- The FPA financial compensation, through its contribution to the national budget, contributes nearly 40% to the Government revenue account, and has thereby helped to maintain stability during a time of heightened tension as the country approaches the first national elections since the *coup d'etat* of 2003. Whilst this is a justifiable end in itself, the stability to which it gave rise has also allowed the continued operation of the EU and other fleets in the GB EEZ.

- The contribution of the Agreement to the viability of the GB fishery sector is minimal. The main barriers to improved economic sustainability are the disincentives for onshore investment, principally related to the lack of stability and lack of access to the EU market for fishery products of Guinea Bissau origin.
- The focus area of the support measures provides an opportunity for a significant improvement in the viability of the Guinea Bissau fishery sector. Progress has been slow, but technical assistance has been delivered recently, and well-focused and directed financial support should ensure that such objectives are met in the medium term. However, significant difficulties remain and improved management of the fishery resource is needed, specifically to limit effort in line with the condition of target and by-catch stocks, and a general strengthening of the fisheries policy framework.

What risks are there to environmental sustainability as a result of the Agreement?

- Elements of the fisheries management plans prepared by the partner country, and which formed the basis for the shrimp trawl fishing amendment to the 9th Protocol are not founded on a solid scientific basis. Areas of particular concern not addressed by the current plan are target stock impacts of shrimp trawling, and by-catch impacts of shrimp and cephalopod trawling.
- The demersal trawl fishery appears to have been a central factor in the continuing decline in biomass identified by fisheries researchers, and a significant depletion in the shrimp stocks (to the point of non-viability). The EU fishing effort under the Agreement, accounting for an average of 33 out of 52 shrimp vessels, and 9 out of 22 cephalopod/fish vessels, has contributed to a significant degree to this outcome. In this respect the Agreement has not contributed towards responsible fishing.
- Guinea Bissau has unique and important turtle breeding grounds for the endangered Green Turtle (*Chelonia mydas*); other endangered and critically endangered turtle species are also present. The demersal trawl sector is implicated in the mortality a small but finite number of marine turtles, to which the Agreement will have made a proportionate contribution. There is a need to consider the feasibility of by-catch reduction measures.
- Purse seine and pole and line fishing opportunities are pursued to only a minor extent in the Guinea Bissau EEZ, compared to the regional exploitation of the target tuna resources. The impact of the Agreement on tuna stocks is negligible.
- Surface long-line opportunities are also pursued only to a minor extent. Although the activities of this segment target depleted shark resources, and implicate a by-catch of marine turtles, the low level of utilisation means that neither of these impacts can be associated with this Agreement.

3.5.5 Policy Coherence

The Fishery Agreement is only partially compliant with principles of responsible fisheries management as expressed within the Common Fisheries Policy. Fishing opportunities provided for shrimp and to a lesser extent cephalopod trawlers have contributed to non-sustainable fishing practices in the GB EEZ, particularly in relation to shrimp stocks and levels of by-catch mortality of demersal fishes. Potential impacts on endangered turtle populations have not been addressed. The partner country's fisheries policy framework and fisheries management system is only weakly developed and practices such as IUU fishing and weak controls on non-EU fishing activities have also played a significant role in permitting unsustainable fishing practices.

Under the Lomé Treaty, The National Indicative Programme⁴⁸ will provide €62 million of funds from the 9th.EDF (2002-2007) directed in large part (56%) at construction of road infrastructure. One objective of the NIP is rural poverty alleviation through development of exports from private sector rural and agricultural enterprises. In this respect there is a degree of coherence between the stated NIP objectives and the FPA objectives. However, the *de facto* utility of the FPA has been the budgetary support provided by the financial compensation during the present critical transition to democracy following the 2003 *coup d'état*. This utility and the associated failure of the NIP to address this need was recognised in 2005, when the Community advanced compensation payments under the FPA to meet critical expenditure needs. Whilst this does not necessarily represent an inherent policy conflict, the Fisheries Agreement, linked as it is to natural resources subject to environmental and other impacts, is not an appropriate measure for budgetary support. In 2005, the NIP and RIP funds were re-programmed to provide medium term budgetary support, conditional on IMF bill of health under the staff monitored programme. This re-alignment of priorities for GB under the NIP has ensured a degree of policy coherence in the use of the different instruments available within the frame of cooperation between the Community and the Government of GB.

The Community and ECOWAS progress towards the development of an EPA, expected to be introduced in 2008, is unlikely to have a short term impact on Guinea Bissau. The trade development objective of the EPA is coherent with the FPA objectives. However the EPA will only deliver positive benefits in relation to the GB fishery sector if the FPA is successful in ensuring sustainable exploitation of fishery resources, and associated development of the onshore fishery sector. The Community's financial contribution includes compensation for access and support for measures to assist the development of the fishery sector. The support measures have focused on key issues of sanitary controls for exported fishery products and improvements to the fisheries law and enforcement, thus addressing the weak enforcement framework. These are considered to be highly appropriate to the needs of the partner country, and fully in line with Community development policies in relation to both the National Indicative Programme and a future European Partnership Agreement.

3.5.6 Risks

The main risk associated with the EU Guinea Bissau FPA is related to the viability of the Agreement in relation to the fishery resources available. Along with changes in fuel costs and market prices, shrimp stock decline has impacted on the profitability of this fishery, with vessels in some segments breaking even at best in 2004, and making a loss if financial costs are taken into account. Some vessel owners have indicated that they intend to leave the fishery. Given the importance of the shrimp fishery to the value of the Agreement (more than 80% of the value is attributed to his stock) its potential loss from the Agreement will have a critical impact on Government revenues, needed to meet salary commitments.

In the short term there is a direct link between maintaining the value of the shrimp fishery to EU vessels and preventing a return to civil war. In the longer term, this risk is expected to be lessened, as the EU's NIP becomes orientated towards budgetary support, and the IMF Staff Monitored Programme and WB-induced reforms improve other aspects of the public finances, thus reducing the dependency on financial compensation from this Agreement.

⁴⁸ *Coopération São Tomé e Príncipe - Communauté européenne, Stratégie de coopération et Programme Indicatif National, SÃO TOME AND PRINCIPE - COMMUNAUTÉ EUROPÉENNE, 9 ème FED, 2002-2007*

CONCLUSIONS AND RECOMMENDATIONS

3.6 CONCLUSIONS

The principal conclusions with respect to the current protocol are as follows:

The current protocol, which is the 9th under the Fisheries Agreement between the EU and Guinea Bissau, has been **effective** in providing fishing opportunities for an average of 78 EU purse seiners, comprising 33 shrimp trawl vessels 9 cephalopod/fish trawl vessels, 27 purse seiners, and 9 pole and line vessels. The Agreement has ensured employment for an estimated 509 persons in the Community and 141 persons in Guinea Bissau, and has provided supplies to the EU market averaging 8,476 tonnes/year, valued at €36 million (although this value has fallen in the latter years of the Protocol). The Agreement has not been effective in providing supplies of fish to Guinea Bissau due the unstable and unfavourable climate for business investment, and the lack of compliance with EU sanitary norms. Neither has it been effective in stimulating the development of the Guinea Bissau fishery sector due to the failure of the policy framework to address the lack of linkages with the EU fleet activity (such as up- and downstream investments). In terms of the contribution to responsible fishing, the Agreement has ensured that fishing effort by EU vessels is pursued at a sustainable level. However, sustainability is mitigated by the lack of enforcement of landing declaration provisions by the partner country. It is also undermined by partner country policies and lack of control of activities undertaken under other fisheries access arrangements. The protocol, despite a specific provision in its mid-term amendment, has not succeeded in encouraging a non-discriminatory approach by the partner country, and a stronger conditionality may be indicated in the future.

In terms of **efficiency**, the net cost to the European Community averaged €10.6 million/year, delivering benefits of €39.7 million, a net benefit of €29.1 million /year, providing a cost advantage of 3.7. In this respect the Agreement may be regarded as efficient. However, cost efficiency has declined in the latter year of the Protocol, to less than 3. Of the income provided to Guinea Bissau, 80% was provided by public funds, and 20% from the vessel owners, in the form of licence fees and observer payments and payments in lieu of landings. The Agreement was efficient in providing usable fishing opportunities for the demersal trawl sector. Shrimp trawlers utilisation has been in the order of 40%, with Spanish and Portuguese trawlers uptake of licences being of the order of 30-35% in 2003/2004; on the other hand, uptake by Italian vessel owners (with a greater focus on inshore resources) was higher over the first 3 years of the Protocol, between 50 and 60%. No shrimp licences attributed to Greece were taken up during the Protocol. Fish/cephalopod trawl utilisation has been between 60 and 70% overall, with utilisation by Spanish vessels increasing to 100% in the last two years. Italian and Greek utilisation rates are much lower, 42 and 21% respectively. Greek trawler owners did not take up licences in 2001/2002, but used 20-40% of opportunities in the remaining years. It is too early to assess the effect on trawl sector uptake of adjustments to the Protocol in 2004, but anecdotal evidence from the stakeholder interviews suggests that the incentives to take up shrimp fishing opportunities have not improved, and several operators have moved their vessels to other fisheries. Take up rate of the licenses has continued to be high for the tuna sector averaging 70-80% (purse seine) and 50% (pole and line fleets) during the first three years of the Protocol. Licences are purchased in case of need as part of a regional fishing strategy. However these vessels have a relatively low catch dependency on the EEZ. In this respect the fishing opportunities could be provided more efficiently by reducing the catch reference quantities which determine the licence fees under the agreement. Surface longline fishing opportunities are hardly utilised at all. No surface longline opportunity has ever been taken up during the course of this agreement by Portugal. In this respect the Agreement has provided fishing opportunities which were not utilised. In general Licence fees paid by vessels amounted to an average of 6% of the catch value generated, varying between 5.5 to 7.6 % for demersal trawl segment, to 14.3 to 16.6% for tuna vessels, the latter high figures reflect the low actual catches taken in the EEZ.

In terms of **relevance**, the Agreement has satisfied the needs of EU vessel owners for access to fisheries resources of shrimp and cephalopods, and for the tuna purse seine and pole and line sectors. The Agreement appears to have little relevance in relation to demersal finfish or in relation to surface longliners, where there is a negligible uptake of licence opportunities. In terms of the Government of

Guinea Bissau, the Agreement has satisfied an important need for revenues for the national budget. The Agreement has provided stability during a time of extreme political sensitivity, as the country returns to democracy following a *coup d'etat* in 2003, assisting the country to work through a programme of activities under Article 96 of the Cotonou Agreement. Initial difficulties in the accountability and appropriation of funds for support measures in favour of the fisheries sector were resolved by a highly relevant mid-term amendment to disbursement procedures. As a result the fishery sector needs of Guinea Bissau are now being addressed with a number of developments being promulgated, notably in relation to introduction of export sanitary controls and improved fisheries research and surveillance activities. These measures have been supplemented and strengthened by a well focused technical assistance mission supported by the Community. The terms of the amended Protocol required that EU flagged vessels be prohibited from operating in Guinea Bissau under access arrangements other than the EU-GB FPA. The relevance of the Agreement is prejudiced by the actions of the Guinea Bissau Government who renewed an agreement with FEDERPESCA, an EU party representing EU beneficial ownership interests operating non-EU flagged vessels and also CONAPEMAC, a Chinese interest group. The Government of GB has allowed the negotiation of new access arrangements apparently in breach of conditions relating to the principle of non-discrimination set out in Article 3 of the Protocol.

The contribution of the Agreement to the viability of the Community fisheries sector is substantial in relation to demersal trawl vessels targeting the shrimp and cephalopod resources. Here the FA contributes towards the continued viability of the 33-34 vessels in the Spanish, Italian, and Portuguese distant water fleets. The agreement meets the needs of fisheries dependent regions in Vigo, Huelva and Las Palmas (ESP), Aveiro (PT), Concarneau (FR), Bari and San Benedetto del Tronto (IT). However the agreement does not contribute substantially to the viability of the tuna purse seine, pole and line or surface long line fleets. The loss of opportunities directed at these sectors would not have a significant impact on viability. The Agreement does not contribute to the viability of the Guinea Bissau fishery sector, with only 119 jobs onboard EU vessels (representing perhaps 1-2% of fisheries employment).

With regard to sustainability, the Contribution of the Agreement to responsible fisheries depends on the context. In proportion with other fisheries access arrangements offered by the Government of Guinea Bissau, the Agreement appears to have contributed to an excessive exploitation of shallow and deep water shrimp stocks, and to high levels of bycatch which have caused a significant reduction in demersal biomass, the longer term impacts of which are not understood. The low catches, in terms of tuna and large pelagic resources, means that the Agreement has negligible impacts on these stocks. However the Agreement may also impact to a small but proportionate extent to the mortality of several endangered species of marine turtle, one of which has an important nesting site in the EEZ. There is clear evidence of non- and under- declaration of catches by EU vessels in the demersal trawl sector, in clear contravention of the Agreement. The partner country has failed to enforce these provisions. Weak institutional capacity for fisheries research means that current fisheries management recommendations by the Partner country would not lead to sustainable fisheries. Sustainability is therefore threatened by the lack of a scientifically sound basis for fisheries management. The Agreement has however contributed to strengthening fisheries research and fisheries surveillance means, and associated technical assistance has supported the strengthening of fisheries law and surveillance plans, which will underpin future improvements in responsible fisheries.

In conclusion, the political and economic interests of both parties have been positively served by the Agreement, which should therefore be viewed as a coherent measure for establishing mutually beneficial fishing activities within the Guinea Bissau EEZ. The Agreement has been implemented efficiently, although the majority of the economic advantages are derived by the European Community. Nevertheless, the importance of the financial compensation element to the national budgetary revenue of Guinea Bissau cannot be under-stated. It has made a significant contribution to stability during a period of intense political and economic crisis. The Agreement has therefore been highly relevant to the needs of the partner country. It has been relevant to some, but not all, of the Community fishery sector beneficiaries. The Agreement is relevant and coherent with Community policies in relation to fisheries (in relation to the CFP), development (in relation to the Cotonou Agreement, and particularly in relation to the Article 96 procedure applied to Guinea Bissau) and trade in relation to a future ECOWAS European Partnership Agreement. However the Agreement has been undermined by the weak policy framework of the partner

country, especially concerning non-discrimination in relation to other non-EU access arrangements. These weaknesses threaten responsible fishing.

ANNEX1 : LIST OF PERSONS MET

Person	Position	Institution
Drª Susana Salvador	Head – External Resources Division	DGPA (Portugal)
Eng. Pedro França Morte	Managing Director, President	Sociedade Miradouro (Portugal) ADAPI (Portugal)
Dr. Marco Giachetta	Responsible for International Matters	FEDERPESCA (Italy)
José Ramon Fontan	Director	OP ANACEF (Canary Islands)
Ms. Belen Calvo Uyana	Administrator	EC Unit DEV/D/2
Mr. Norbert Probst	Administrator	EC Unit DEV/B/4
Mr. Hubert Salmon	Administrator	EC Unit DEV/D/2
Ms. Anna Johansson	Administrator	EC DGFISH Unit B3
Ms. Nathalie Brajard vom Stein	Administrator	EC DGFISH Unit B3
Ms. Charlotte Adriaen	Fisheries Adviser	EU Delegation Senegal
Emb. Moreira Martins	EC Delegate	EC Delegation in Bissau
Drª Cesaltina Bastos	Advisor	EC Delegation in Bissau
Dr. Alves Pereira	Economist	EC Delegation in Bissau
Eng. Abílio Coutinho	Technical assistant	EC Delegation in Bissau
Marc Thill	Adviser	EU Delegation GB
Austin Joko Jones	Director	SOCU (CRSP)
Namory Kone	Statistician	SOCU (CRSP)
Drª Helena Embaló	Minister	Ministry of Fisheries
Eng. Ildefonso Barros	General Director	GD of Fisheries, Ministry of Fisheries
Dr. Cirilo Vieira	General Inspector	Ministry of Fisheries
Dr. Djibril Balde	Technical advisor	Min. of Fisheries
Mussa Mané	Director of Legal Department	Ministério das Pescas
Sebastião Pereira	Director Serviço de Pesca Industrial	Ministério das Pescas
Dr. Hugo Nosolini	Director	CIPA
Dr. Abel Santos	Head Department of Statistics	CIPA
Caramba Sauane	Artisanal fishery statistics	CIPA
Eng. Armindo Ferreira	Lab. Manager	CIPA
Dr. Luís Malabe da Fonseca	Head Department of Marine Resources	CIPA
Dr. Malame Mané	General Director	DPA (Artisanal Fisheries)
Mr. Domingos Tubento	Managing Director	Semi-industrial Fisheries Project - Fishing complex of Alto Bandim
Eng. Quintino Fernandes	Production Director	

Person	Position	Institution
Mr. Sotondji Dazogbo	FAO Representative	FAO delegation
Eng. Rui Fonseca	Representative's assistant	FAO Representation
Mr. Franz Einzman	Director	GTZ (German cooperation)
Mr. Gianpaolo Pisano	Cônsul	Italy's Consulate
Dr. Mamadú Jao	Director	INEP
Osiris Pina Ferreira	Judge 1st instance	Ministry of Justice
Dr. Lourenço Vaz	General Director	GD Environment - Min. of Environment and Natural Resources
Dr. Nelson Gomes Dias	Resident Representative	IUCN
Dr. Alfredo Silva	Director	IBAP Institute for Biodiversity and Protected Areas
Eng. Artur Silva	General Director	Cooperation, Min. of Foreign Affairs (former Min. of Fisheries)
Dr. Jaimentino Có	Director General of Commerce and	Ministry of Commerce, Industry, Tourism and Handcraft
Mr. Batista Sanca	Programme analyst	UNDP
Dr. Josué Almeida	Director	Privatisation project
Dr. Roberto Vieira	Head of Department	INEC
Paulo Baranção	Coordinator / PASP	Ministério das Pescas
Dr. Henrique Silva	Technical assistant	PASP Project
Mr. Domingos Gomes	Managing Director	Sigmar
Mr. Herculano Eucada	Managing Director	Guialp and Socinveste
Mr. Fernando Ialá	Director	Afromar Lda.
Dr. Francelino Lopes		Ministry of Economy and Finances, Private Investment Promotion
Mr. António Baz	Official	Customs
Mr. Carfá Embaló	Director General	Secretary of State of Budget
Dr. Malal Sané	Director	FISCAP
Mr. Martinho Indami	Head of Inspection Services	FISCAP
Alberto Martins Njai	Fisheries Observer	FISCAP
Carlos Nelson Sano	Fisheries Observer Union leader	FISCAP
Mr. Bongo Balde	Fishing Observer	FISCAP
Mr. Braima Candé	President	SINAMAR
Dr. Rui Ferreira	Deputy President	PNC- Plano Nacional de Convergência
Mr- Benoit	EC Consultant	EC
Dr. Inocêncio Lopes	Technical assistant	PRODEPA Project
Mr. Mário Duro	Managing Director	Vicarbel
Mr. Jorge Fernandes	Managing Director	Socpromar and Socomar

Person	Position	Institution
Mr. José Davies Jr.	Managing Director	Orango Fishers
Mr. Mário Hipólito Carvalho	Managing Director	Amapesca
Eng. Tomane Camara	Deputy President	NGO AD
Mr. João Handen	President	Plataforma ONG
Eng. Carlos Nhate	General Director	GD Industry
Mr. Soares Vaz	Head of Standards services (Normalização e Metrologia)	GD Industry
Mrs. Fátima Câmara	President	AMC (Associação das Mulheres Comerciantes)
Mr. José Gonçalves	Managing Director President	JoseMar ANEPA (Associação Nacional de Empresas de Pesca)
Mr. Li Xuelin Mr. Gu Hong Mr. Wang Jinghua	Representant Vice-Representant Interpreter	CONAPEMAC (Chinese Fisheries company)
Mr. Suleimane Jalo	Technical Assistant (UNIDO)	UEMOA Quality Programme / DG Industry
Sr. Bernardo	P.V. CACINE crew	Ministério das Pescas
Sr. Nino	P.V. CACINE crew	Ministério das Pescas
Sr. Rocha-Dinis	Long-term Portuguese resident	
Prof. Vladimir Kaczinsky	WB MCS Adviser	WB/GEF Biodiv. Prjct
João Cabral	Statistician	CIPA / Ministério das Pescas
Virginia Pires Correia	Statistician	CIPA / Ministério das Pescas
Séco Mané	Statistician	CIPA / Ministério das Pescas
Justino Biai	Programme Officer	IBAP
Oscar Balde	Fisheries Comp. / PASP	Ministério das Pescas
Agostinho Sousa Cordeiro	Capitão Tenente	Marinha de Guerra
Caetano Fernandes	Capitão de Fregata	Marinha de Guerra
Michel Bailligoa	Capitão Tenente	Marinha de Guerra
Aquino Duarte	Coord. nac. PGBZCG	Ministério das Finanças
Mario Musante	General Director	Dir. Ger. Marinha Mercante
Sr. Duarte Barbosa	Harbour Captain	Capitanía do Porto
Fernando Gomes	General Director	Admin. dos Portos (APGB)
João Antonio Miranda	Head of Vessel Department	APGB
Demostenes Menezes d'Alva	Head of Billing	APGB
Baptista Té	Administrator	APGB
Mário Valentin	Director adjunto	CPA – Bubaque
Jorge Sambu	Chefe de Gabinete	CEMA Marinha de Guerra
Malán Dabó	Director	CPA – Bubaque

Person	Position	Institution
Mário Márques Vieira	Del. Regional das Pescas	MinPescas – Bubaque
Filipe Cardoso	Administrator	Casa do Ambiente – Bubaque
Sr Papis	Mechanic & Pilot	Casa do Ambiente – Bubaque
Jorge Gomes	State receipts officer	Ministry of Finance
Sr António & father	Village chief	Binté Ilha de Caravela
João Sousa Cordeiro	Coordinator	NAP
Carfa Embaló	Superior Technician	Budget directorate (MinFin)

ANNEX 2 : BIBLIOGRAPHY, REFERENCES AND DATA SOURCES CONSULTED

- Act 3/78 (1978). Establishing the territorial sea and the Exclusive Economic Zone (EEZ) of the Republic of Guinea Bissau
- Acção para o Desenvolvimento (2004). Relatório de Actividades
- ADF (2001) Evaluation Report: Fisheries Sector Support Project. Republic of Guinea-Bissau. Confidential. GUB/PAAF/2001/01. OCDW. March, 2001. 36p.
- AFR/013 (2001) Planification des pêches industrielles en Guinée-Bissau. FAO GCP/INT/722/LUX. Bissau, October 2001. 42p.
- Africa Regional Office (no date), Coastal and Biodiversity Management Project – Guinea Bissau
- Agence de Gestion et de Cooperation Entre la Guinée Bissau et le Sénégal, (2000). Memorando da Secretaria de Estado das Pescas do Governo Guineense às Negociações com a Parte Senegalesa no Âmbito da Agência de Gestão e de Cooperação entre Guiné-Bissau e Senegal, Bissau
- Alverson, D.L., Freeberg, M.H., Pope, J.G. and Murawski, S.A. (1996). A global assessment of fisheries bycatch and discards, FAO Fisheries Technical Paper, No. 339. Rome, FAO. Reprinted 1996. 233p.
- Amorim, P., Duarte, G., Guerra, M., Morato, T., and Stobberup, K.A. (2004). Preliminary Ecopath Model of the Guinea Bissau continental shelf ecosystem. Modèle Ecopath du plateau continental de la Guinée-Bissau. In: M.L. Palomares and D. Pauly (eds), "West African Marine Ecosystems: models and fisheries impacts"; Univ. British Columbia, Fisheries Centre Research Reports 12(7): 95-112.
- Anonymous, (no date) Etude préliminaire de faisabilité du complexe de pêche de Bissau (Bandim et Bolola).
- Bailey, K. *et al.* (1996) By-catch and Discards in Western Pacific Tuna Fisheries: A Review of SPC Data Holdings and Literature. SPC. Oceanic Fisheries Programme. Technical Report no. 34. Noumea, New Caledonia. 174p.
- Balguerías, E., Quintero, M.E., and Hernández-González, C.L. (2000). The origin of the Saharan Bank cephalopod fishery. ICES Journal of Marine Science, 57: 15-23.
- Barbosa C., Broderick A., Catry P., (1998), Marine Turtles in the Orango National Park (Bijagós Archipelago, Guinea Bissau), Marine Turtle Newsletter 81:6-7
- Benoists, J-D, (2003), Bilan de l'activité de l'assistance technique au Ministère de l'Economie et des Finances, Bissau
- Bjibril B., Vieira H., Correia V. P., Nahada V., (2005). Impacts des politiques commerciales sur la gestion des ressources halieutiques en Guinée Bissau, Rpport final
- Broderick A.C., Catry P., Araújo A., (2000), Action plan for the Conservation of Marine Turtles in Guinea Bissau, IUCN, Bissau
- Broderick, A.C., and Catry, P. (1998). A Preliminary Assessment of the Possible Impact of Industrial Fisheries on Marine Turtles in Guinea Bissau. IUCN-Guinea Bissau, 6p.
- Catanzano Joseph, (2003), Fisheries agreements and access rights with reference to the various situations in West Africa, ACP/EU Seminar, Brussels
- Catry P., Barbosa C., Indjai B., Almeida A., Godley B. J., Vié J. (2002). Short Communication: First census of the green turtle at Poilão, Bijagós Archipelago, Guinea Bissau: the most important nesting colony on the Atlantic coast of Africa

- CECAF (1979). Les ressources halieutiques de l'Atlantique Centre-Est. Première Partie: Les Ressources du Golfe de Guinée de l'Angola à la Mauritanie; J.P. Troadec and S. Garcia (eds), FAO Fisheries Tech. Pap. N° 186, FAO, Rome, 167p.
- CECAF (1997). Groupe de travail ad hoc sur les céphalopodes, M. Lamboeuf (ed), COPACE/PACE/Ser No. 97/63, Rome, FAO, 103p.
- CECAF (1997). Groupe de travail ad hoc sur les merlu et les crevettes profondes, M. Lamboeuf (ed), COPACE/PACE/Ser No. 97/62, Rome, FAO, 90p.
- CEDEAO, (2004). Roteiro das negociações do Acordo de Parceria Económica entre a África Ocidental e a Comunidade Europeia, Reunião dos Ministros do Comércio, Accra, (tradução)
- CIPA, (2005). Anuário Estatístico de pesca Industrial ano 2000, Direcção de Estatísticas Informáticas e Publicações,
- CIPA, (2005). Anuário Estatístico de pesca Industrial ano 2001, Direcção de Estatísticas Informáticas e Publicações,
- CIPA, (2002). Inquérito quadro ao longo da costa marítima da Guiné-Bissau anos 1998 e 2000/2001, Bissau
- CIPA, (2004). Estatísticas da pesca industrial de 1997
- Chavance, P., Ba, M., Gascuel, D., Vakily, M., and Pauly, D. (eds) (2005). Proceedings of the Symposium: Marine Fisheries, Ecosystems, and Societies in Northwest Africa: half a century of change, 24 to 28 June 2002, Dakar, Senegal. ACP-UE Fisheries Research Reports No. 15, 530p.
- Clucas I., Teutscher F., (1998). Report and Proceeding of FAO/DFID Expert Consultation on Bycatch Utilization in Tropical Fisheries, Beijing, China
- CNPE, (2003). Programme annuel de convergence de la Guinée-Bissau pour l'année 2003-2004, Bissau
- CNPE, (2005). Programme pluriannuel de convergence, de stabilité, de croissance et de solidarité 2005-2007, Bissau
- CNPE, (2005). Rapport 4ème trimestre 2004, Bissau
- CSRP, (2001). Rapport de mission sur le pêches en Afrique de l'Ouest
- Deben Alfonso César, (2003). ACP-EU Fisheries Relations: towards mutual benefits, ACP/EU Seminar, Brussels
- DGFPA, (1994). Estatísticas da Pesca Artesanal. Direcção Geral do Fomento da Pesca Artesanal (DGFPA), Ministério das Pescas, 104p.
- DG Pescas, (1993). Cooperação com os países africanos de língua oficial portuguesa, o sector das pescas na Guiné-Bissau, Lisboa
- DFID/FAO (2001). Consultation on the participatory re-definition of the national policy for the sustainable management and development of artisanal fisheries. FAO GCP/INT/735/UK. Bissau, June 2001. 59 p.
- Diop, M., Inejih, D.A., Bouzouma, M.O., Sidina, E.O., Hamady, B.O., Meissa, B.O., Abdoulaye, D. (2004). Rapport Final Campagne démersale du 23 juin au 17 juillet 2004 N/O Al-Awam, Guinée-Bissau. Institut Mauritanien de Recherches Océanographiques et des Pêches (IMROP), 42p. (+ Annexes)
- DIPA (1998). Guinea-Bissau: Frame and Socio-economic survey. DIPA Newsletter March 1998. No. 37. p 24-25
- Direcção Geral do Ambiente, (no date). Plano Nacional de Gestão Ambiental (Síntese)
- Djassi S., Tubento A. D., Mané M., (2004). Análise dos Constrangimentos na Fileira do sector das Pescas
- Dodman T., Sá J., (2005). Monitorização de aves aquáticas no Arquipélago dos Bijagós, Guiné-Bissau

- EC, (2004). Information Note to the College from Commissioners Lamy and Nielson on Progress in EPA Negotiations
- EC, (no date). Trade at the Service of Development: an Action Plan,
- ENDA/WWF, (2004). Impact des politiques liées au commerce dans la gestion des ressources halieutiques en Afrique de l'Ouest: le cas de la Guinée-Bissau
- Failler P., Walle G. V., Dia A. D., Deme M., Balde D., (2004). Dynamiques d'exploitation et de valorisation des ressources halieutiques, Projecto Consdev
- FAO, (2004). Programme National D'Investissement à Moyen Terme (PNIMT), TCP/GBS/2907
- FAO, (2003). Fourniture de matériel de pêche pour une relance de la production halieutique en Guinée-Bissau, project PCT (compte-rendu final du project)
- FAO (1997). Technical consultation on reduction of wastage in Fisheries. FAO Fisheries Report No. 547, Supplement. FIU/R547 Suppl. FAO. Rome, Italy. p 183-208.
- FAO, (1994). Guinea Bissau: General Identification Report of Agriculture and Rural Development Projects
- FAO, (1993). Revista sectorial da pesca artesanal na Guiné-Bissau, Relatório técnico nº46, Cotonou
- FAO, (1992). Social and cultural constraints to the development of artisanal fisheries in Guinea Bissau, Rome
- Failler, P. (2005). Impacts des politiques commerciales sur la gestion des ressources halieutiques en Guinée Bissau; Rapport Final. Programme Pêche, Commerce et Environnement en Afrique de l'Ouest (PCEAO), Enda Diapol, 83p.
- FAO/WB (2003). Diagnosis and emergency restructuring plan to enhance the domestic benefits of the fishing sector and its integration in the world economy. Joint FAO/World Bank Fisheries Sector Memorandum by G. van Santen, J. Virdin, K. Kelleher, and D. Greboval, 84p.
- Fernandes, R., (1996). O programa de Ajustamento Estrutural na Guiné-Bissau: efeitos sociais do PAE no sector das pescas, INEP
- Ferreira, M., (1992). O papel da mulher na pesca artesanal, Boletim de Informação Científico-Técnico 3-4
- Fortes, O., (1996). O programa de Ajustamento Estrutural na Guiné-Bissau: a pesca industrial, INEP
- Garcia, F., (1992). Breve análise económica do subsector da pesca artesanal na Guiné-Bissau, Boletim de Informação Científico-Técnico 3-4
- Global Vision, (2002). Aide mémoire sur la mission de relance du secteur de la pêche de la Guinée-Bissau
- Godley, B.J., Almeida A., Barbosa C., Broderich AC, Catry P.X., Hays GC, Indjai B, (2003). Using Satellite Telemetry to Determine Post-Nesting Migratory Corridors and Foraging Grounds of Green Turtles Nesting at Poilão, Guinea Bissau
- Greboval, D., Kelleher, k., van Santen, G., Virdin, J. (2002). Diagnosis and emergency restructuring plan to enhance the domestic benefits of the fishing sector and its integration in the world economy. FAO/World Bank. Global Trust Fund for Sustainable Fisheries. Washington 2002, 84p
- Greenpeace, (2001). Pirate Fishing: Plundering West Africa
- Hall, S.J. (1999). The effects of fishing on marine ecosystems and communities. Fish Biology and Aquatic Resources Series 1, Blackwell Science, Oxford, 274p.
- INEP, (2000). Estratégias para um desenvolvimento sustentável 2000-2010, Bissau
- INFOSA/NORAD, (no date). Infopeche and SADC member countries fishery profiles,
- INIP, (1992). III Campanha do NE "Noruega" nas Águas da República da Guiné-Bissau Abril – Junho 1990, Relatórios Técnicos e Científicos Nº 63, Portugal

- INIP, (1993). IV Campanha do NE “Noruega” nas Águas da República da Guiné-Bissau Maio – Junho 1991, Relatórios Técnicos e Científicos N° 70, Portugal
- INIP, (1990). II Campanha do N/E «Noruega» nas Águas da República da Guiné-Bissau Março – Abril 1989, Relatórios Técnicos e Científicos N° 30, Portugal
- INIP, (1989). I Campanha do N/E «Noruega» nas Águas da República da Guiné-Bissau Abril – Maio 1988, Relatórios Técnicos e Científicos N° 18, Portugal
- Institut Mauritanien de Recherches Océanographiques et des Pêches, (2004). Campagne D’ Evaluation des Ressources Demersales de la ZEE de la Guinée-Bissau
- Instituto Español de Oceanografía, (2002). Informe sobre el estado actual de los Recursos de Guinea Bissau según los resultados de la campaña realizada en Octubre de 2002 a bordo del B/O “Vizconde de Eza”.
- Instituto Português de Investigação Marítima, (1995). V Campanha de Investigação de Recursos Haliêuticos das Águas da República da Guiné-Bissau, Lisboa
- IUCN (no date). Estratégia Regional para as areas protegidas marinhas na Africa Ocidental,
- IUCN (2004). Global Status Assessment, Green Turtles (*Chelonia mydas*), Marine Turtle Specialist Group Review
- IUCN, (2004). West Africa Inter-Session Programme, 2005-2008
- Kaczynski V.M., (1998). Projecto de revitalização da FISCAR, Washington Univ.
- Kaczynsky V.M., (1995), Fisheries Management Plan for 1996 Mission Report, TIPS, Guinea Bissau
- Kaczynsky V.M., (1995), Fisheries Management: Final Mission Report, TIPS, Guinea Bissau
- Kaczynski V.M, (1994). Novas orientações da política pesqueira nacional: materiais para reunião, TIPS, Guinea Bissau
- Kaczynsky V.M., (1994). Plano Anual de Gestão dos Recursos Pesqueiros da Guiné-Bissau para 1996, TIPS, Guinea Bissau
- Kaczynsky, V.M., Looney, S.W. (2000). Coastal Resources as an Engine of Economic Growth and Reduction of Poverty in West Africa: Policy Considerations. *Coastal Management*, 28:235-248, 2000.
- Kebe M., Gallene J., Thiam D., (1993). Revista sectorial da pesca artesanal na Guiné-Bissau, Relatório Técnico N° 46, Organização das Nações Unidas para a Alimentação e a Agricultura, Cotonou
- Kelleher K., (2001). L’élaboration d’un régime d’accès sous-régional à la pêche étrangère en Afrique de l’Ouest, CSRP
- Law-Decree 6-A/2000 (2000). Fisheries Law
- Law-Decree 4/2004 (2004). Establishing CIPA as the competent authority regarding health and quality control of fish and products thereof
- Law-Decree 7/98 (1998). Establishing the Fisheries Research Centre (Centro Investigação Pesqueira Aplicada – CIPA)
- Law-Decree 9/96 (1996). Regulating FISCAR (Comissão de Fiscalização Marítima)
- Law-Decree 4/96 (1996). Fisheries Regulation
- Laurent L., Humphrey S., Adrichem E.V., (2002). Plan D’ action Regional Pour la Conservation des Tortues Marines en Afrique de L’Ouest, 2003/2007, Draft1, FIBA/IUCN/WWF
- Lifton C. J., (1992). Social and Cultural Constraints to the Development of Artisanal Fisheries in Guinea Bissau, FAO, Guinea Bissau

- Longhurst, A. (1983). Benthic-Pelagic Coupling and Export of Organic Carbon from a Tropical Atlantic Continental Shelf-Sierra Leone. *Estuarine, Coastal and Shelf Science*, 17: 261-185.
- Mendy Peter Karibe, (1996). The emergence of political pluralism in Guinea Bissau, INEP
- Ministério da Economia e Finanças, (2003). Código do Investimento
- Ministério da Economia e Finanças, (2004). Strategic National Document for Poverty Reduction, FED, Bissau.
- Ministério da Economia e Finanças e Ministério das Pescas, (2004). Plano de Gestão para o Sector das Pescas, Bissau
- Ministério das Pescas, (2005). Plano de Gestão das Pescas para o ano de 2005, Bissau
- Ministério das Pescas (2005). Estratégia de apoio ao sector das pescas (2005-2007), (Documento de trabalho)
- Ministério das Pescas (2004). Protocol of Cooperation between the Ministry of Fisheries and the Ministry of Defence on matters pertaining to the Control and Surveillance of Fisheries Activities. Draft. Ministry of Fisheries.Bissau, 2004.
- Ministério das Pescas (2004). Agreement Protocol referring to the conditions applying to fishing activities of vessels whose operators are affiliated with FEDERPESCA in the EEZ of Guinea-Bissau. MinPescas & FEDERPESCA. Bissau. September, 2004.
- Ministério das Pescas , (2004). Programa de execução das acções ad-hoc – 2ª tranche
- Ministério das Pescas, (2004). Relatório de execução e justificativos de acções específicas do primeiro ano (2001/2002) - Período de execução: de Janeiro de 2003 a Janeiro de 2004
- Ministério das Pescas, (2002). Agreement Protocol between the Republic of Guinea-Bissau and China International Fisheries Corporation (CIFIC) - CONAPEMAC. MinPescas & CONAPEMAC. Las Palmas. January, 2002.
- Ministério das Pescas, (2000). Fisheries Agreement Protocol. MinPescas & KIM.ANAVIPESCA. Bissau. May, 2000.
- Ministério das Pescas, (2000). Fisheries Agreement Protocol. MinPescas & T.K. MOTORS. Bissau. June, 2000.
- Ministério das Pescas, (1997). Pesca industrial: estatísticas, avaliação de captura
- Ministério das Pescas, (1996). Circular N° 03/DGPI/96, Bissau
- Ministério das Pescas, (1995). Plano Anual de Gestão dos Recursos Pesqueiros da Guiné-Bissau para 1996
- Ministério dos Recursos Naturais e Energia, (2002). Convenção sobre a diversidade biológica, Bissau
- Ministério dos Recursos Naturais e Energia-Direcção Geral do Ambiente, (2000). Estratégia Nacional de Acção para a Conservação da Diversidade Biológica na Guiné-Bissau, Bissau
- Negue F. K., (2005). Programme UEMOA, pour la mise en place d' un système d' accreditation, de normalisation et de promotion de la qualité – Mission D' assistance a la formulation de plan d'actions pour l' appui au dispositif Bissau Guineen de controle qualite des produits de la peche a l' exportation par le programme qualite UEMOA, ONUDI, Bissau
- NEPAD, (2004). Programme détaillé pour le développement de l'agriculture africaine (PDDAA), Rep. De Guinée-Bissau, (version provisoire)
- República da Guiné-Bissau, (2004). Proposal of the Government Programme for the Fisheries Sector. Programa do Governo. Bissau, April 2004. 4 p.
- República da Guiné-Bissau, (2004). Government Programme - Draft. Programa do Governo. Bissau, 2004. 62 p.

- República da Guiné-Bissau, (2004). State Budget Proposal - Draft. Presidency of the Council of Ministers. Bissau, 2004. 103 p.
- República da Guiné-Bissau, (2004). Strategic National Document for Poverty Reduction. Ministry of the Economy and Finance / FED NC. Bissau, July 2004. 112 p.
- ROCHE International, (1995). Plan Directeur de Pêche Industrielle, Guinée-Bissau
- SASDA, (1994). Foreign Aid and Macroeconomic Development in Guinea Bissau
- Saetersdal, G., Bianchi, G., and Strømme, T. (1999). The Dr. Fridtjof Nansen Programme 1975-1993. Investigations of fishery resources in developing regions. History of the programme and review of results. FAO Fish. Tech. Papers, n° 391, Rome Fao, 434p.
- Silva A.S., (no date). Historia e a evolução institucional das Áreas Protegidas na Guiné-Bissau
- Silva, A., (2005). Amélioration des conditions de gestion et exploitation des ressources halieutiques en Guinée-Bissau (« projet bancable ») PDDAA-NEPAD
- Sobrino Yraola, I., and García Jiménez, T., (1997). Análisis de los descartes por la flota española en la pesquería de crustáceos decápodos en aguas de la República Islámica de Mauritania. Informe Técnico, IEO, 166 24p.
- State Secretariat for Planning, (2002). Government report on the mission to the African Development Bank (Fisheries Sector Support Project). State Secretariat for Planning. Bissau. January, 2002.
- Stobberup, K.A., Amorim, P., Pires, V., and Monteiro, V.M., (2005). Assessing the Effects of Fishing in Cape Verde and Guinea Bissau, Northwest Africa. In: Kruse, G.H., V.F. Gallucci, D.E. Hay, R.I. Perry, R.M. Peterman, T.C. Shirley, P.D. Spencer, B. Wilson, and D. Woodby (eds), "Fisheries assessment and management in data-limited situations"; Alaska Sea Grant College Program, University of Alaska Fairbanks.
- Suleiman Djassi, (1995). Fiscalização marítima, TIPS
- UEMOA, (1999). Etude sur la coordination et l'harmonisation des programmes d'ajustement du secteur agricole (PASA) au sein de l'UEMOA, paris
- UEMOA, (2002). Mise en place d'un système d'accréditation, de normalisation et de promotion de la qualité au sein de l'UEMOA, Bulletin N°2 Décembre 2002
- UEMOA, (2004). Lettre du Programme Qualité UEMOA, Bulletin trimestriel d'information N°4 Novembre 2004
- UNDP, (2001). Guinée-Bissau: Bilan Commun de Pays
- UNDP, (2002). Plan cadre des Nations Unies pour l'aide au développement de la Guinée-Bissau
- US- National Oceanic and Atmospheric Administration, (2002). Stock Assessment and Fishery Evaluation for Atlantic Highly Migratory Species 2002
- Vaz J.T., (1997). Actualização e análises das estatísticas pesca industrial 1994/97, TIPS
- Vieira C., (1992). Pesca artesanal: projectos de desenvolvimento e novo papel do Estado, Boletim de Informação Científico-Técnico, 3-4
- WB, (1982). Guinea Bissau: an introductory economic report
- Yraola I.S., (2002). Campaña Guinea Bissau, Instituto Español de Oceanografía, Cádiz

ANNEX 3 : CONSULTANTS' ESTIMATES OF FISHING MORTALITY AND STOCK CONDITIONS

Estimated fishing mortality for commercial species groups is presented in the following table. Note that fishing mortality (F) is given as instantaneous mortality rates per year. In order to obtain the percent survival (S) for a specific F in a given year, then this can be calculated as: $S = 100 * \text{Exp}(-F)$. For example, considering only fishing mortality and not natural mortality due to other causes:

- For $F = 0.5$, then $S = 61\%$;
- For $F = 2$, then $S = 14\%$;
- For $F = 10$, then $S = 0.005\%$;

Table 1 : Catch, biomass and fishing mortality estimates for commercially important demersal species.

Species	Mean Std Catch ⁴⁹ (kg/nm ²)		Biomass ⁵⁰ (t)		Mean Catch (t)		Fishing Mortality ⁵¹ (per year)	
	S 2004 ⁵²	S Mean ⁵³	B 2004	B Mean	Min. ⁵⁴	Max. ⁵⁵	Min.	Max.
Anglerfish	44	23	354	181				
Catfish	1,097	367	8,776	2,938	2,269	4,084	0.77	1.39
Croakers	737	296	5,895	2,365	361	650	0.15	0.27
Cusk eel	46	31	371	250	24	44	0.10	0.17
Cuttlefish	239	185	1,914	1,479	1,765	3,177	1.19	2.15
Dories	33	65	267	517	8	15	0.02	0.03
Flatfish	241	299	1,927	2,394	2,985	5,374	1.25	2.24
Goatfish	143	126	1,142	1,009	444	799	0.44	0.79
Groupers	41	106	332	851	81	146	0.10	0.17
Grunts	748	1,376	5,985	11,010	826	1,487	0.08	0.14
Hairtails	18	175	144	1,399	214	385	0.15	0.28
Hake	19	9	152	75	396	713	5.31	9.55
Meagre	0	32	0	258	2,541	4,574	9.83	17.70
Octopus	152	252	1,215	2,016	691	1,245	0.34	0.62
Rays	1,438	627	11,503	5,019	19	33	0.00	0.01

⁴⁹ Standardised catches calculated using the swept area method, considering net dimensions and trawling speed.

⁵⁰ Extrapolation to cover an area of 8000 nm² (70 % of the continental shelf) considered accessible to the industrial fisheries.

⁵¹ Yearly fishing mortality (instantaneous rates) were estimated as $F = C/B$, where B is mean yearly biomass, assuming steady state conditions. Shaded values indicate relatively high F mortality.

⁵² Refers to the Al-Awam survey in 2004.

⁵³ Refers to the mean of the 1991, 1992, and 2004 survey estimates (1995 excluded).

⁵⁴ Calculated as the mean of 2000 and 2001 CIPA catch statistics.

⁵⁵ Hypothetical maximum; assumes an upper limit of about 36000 t demersal catches, or 60% of the upper limit of 60000 tonnes total catches, as explained in the section on catch estimates.

	Mean Std Catch ⁴⁹ (kg/nm ²)		Biomass ⁵⁰ (t)		Mean Catch (t)		Fishing Mortality ⁵¹ (per year)	
Rockfish	503	241	4,028	1,925	2	4	0.00	0.00
Sharks	355	243	2,843	1,941	57	102	0.03	0.05
Shrimp	38	69	302	555	2,659	4,786	4.79	8.62
Sparids	1,186	1,645	9,485	13,158	613	1,104	0.05	0.08
Squid	105	182	844	1,455	11	20	0.01	0.01
Threadfins	548	194	4,380	1,554	1,787	3,217	1.15	2.07
Other ⁵⁶					2,101	3,782		
Total	7,732	6,544	61,858	52,349	19,856	35,741	0.38	0.68
Overall (Commercial and Non-commercial species)								
Com ⁵⁷	6980	5119	55,841	40,955	19,856	35,741	0.48	0.87
N.Com ⁵⁸	3675	5178	29,402	41,426	33160	71,483	0.80	1.73

⁵⁶ Indeterminate catches; biomass estimates are not known. However, these catches are included in the "Total" below.

⁵⁷ Commercial species; ideally, catch rates and biomass should be equal to the "Total" above, but slightly different approaches were used for comparative purposes. In this case, species were defined as commercial on a species-by-species basis. In the "Total" above, this was done on a family-by-family basis.

⁵⁸ Non-commercial species including discards. As there are no estimates for Guinea Bissau, available estimates from the shrimp fishery in Senegal and the Spanish fleet operating in Mauritania were used as indicative (Alverson et al. 1996; Balguerías et al. 2000; Sobrino and García 1997). Assumed discard rates relative to total catch were defined as: shrimp trawling 80% and cephalopod/fish trawling 40%.

In order to get an idea of acceptable levels of fishing mortality (F), it is essential to have an idea of the level of natural mortality (M). Using Pauly's empirical equation, estimates of natural mortality vary between 0.2 and 2 depending on the fish species or group⁵⁹. For shark and ray species, M varies between 0.2 and 0.6, which is related to the larger sizes and slower growth of these species. These relatively high M values are expected in tropical waters (compared to temperate areas) with characteristics such as warmer temperatures, smaller species, higher growth, etc. Thus, this indicates that most of the estimated F values appear to be within reasonable levels, based on the pattern of generally low F values relative to M.

The important exception to the above statement is that fishing mortality in Shrimp indicates overexploitation. The high mortalities in species such as Catfish, Flatfish, Meagre and Threadfins is consistent with the fact that these species share the same habitat as shrimp and that they are important by-catch of the industrial shrimp fishery.

Cuttlefish fishing mortality appears high, but as these are fast-growing species with short life cycles, the level of exploitation may be sustainable⁶⁰. This appears certainly to be the case for Octopus and Squid.

Hake fishing mortality is most likely unreliable, as Hake is a deep-water resource in Guinea Bissau. These deeper waters were not included in the biomass calculations, as they are not well sampled.

Shark and Ray fishing mortality appear low, but this is linked with the low catch estimates. As these species cannot bear high fishing mortality (large and slow-growing species), it is essential to obtain good discard data on a species-by-species basis in order to make a proper assessment. Note also that fishing mortality in non-commercial species is high, based on assumed discarding rates (probably conservative estimates). This is consistent with the observation that biomass of non-commercial species appear to have decreased more strongly than commercial species, as a result of high discard rates. If this is the case, species groups such as Sharks and Rays will suffer most from such levels of exploitation.

In the 1981 and 1988 trawl surveys, extremely high catches of *Balistes* species were recorded. According to Cavarivière (2002)⁶¹, the explanation for this phenomenon appears to have been related to a combination of effects, including hydrographic conditions, their reproductive strategy, and weak predation on the juveniles and adults of this species, possibly associated with impacts of trawl fisheries.

Shrimp Resources

Considering the importance of Shrimp to the EU and FEDERPESCA fleets, a more detailed assessment was attempted in the case of shrimp species. There are various species of shrimp that are being exploited, but the main targets are the deep-water shrimp, *Parapenaeus longirostris*, the shallow-water shrimp, *Penaeus notialis*, and *Parapenaeopsis atlantica* (see Table).

⁵⁹ Amorim et al. 2005

⁶⁰ CECAF 1997a

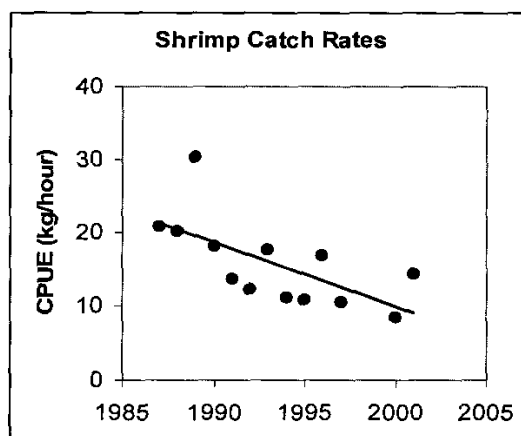
⁶¹ Cavarivière A. (2002). Emergence de trois espèces des communautés démersales de l'Afrique de l'Ouest: points communs et différences. Symposium Proceedings "Marine fisheries, ecosystems and societies in West Africa: half a century of change". ACP-EU Fisheries Dakar, Senegal, 24 to 28 June 2002.

Table 2 : Biomass estimates of crustaceans based on the latest research survey in 2004.

Species	Survey Biomass	Assumed Biomass	Catch Potential
CRABS			
<i>Geryon maritae</i>	439	878	87,8
SHRIMP			
<i>Parapenaeus longirostris</i>	342	684	274
<i>Aristeus varidens</i>	21	42	17
<i>Penaeus notialis</i>	200	400	160
<i>Parapenaeopsis atlantica</i>	199	398	159
<i>Penaeus monodon</i>	36	72	29
Total Shrimp	798	1596	639
LOBSTERS			
<i>Panulirus regius</i>	58	116	35
TOTAL	1295	2590	1313

Source: Diop et al. 2004 & CECAF 1997 & CIPA

Figures show tonnes. Also shown are the catch rates of the industrial shrimp fisheries (right-hand figure), which were compiled from several sources.



Source: Diop et al. 2004 & CECAF 1997 & CIPA

Figures show tonnes. Also shown are the catch rates of the industrial shrimp fisheries (right-hand figure), which were compiled from several sources.

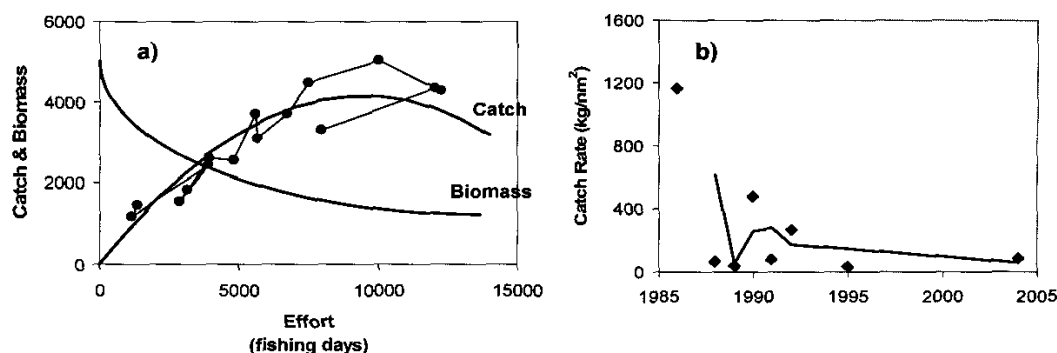
Note that the biomass estimates concern the continental shelf only down to a depth of 200 metres. Thus, the full habitat of the deep-water shrimp, *Parapenaeus longirostris*, was not covered, although the main fishing grounds have been covered (northern waters).

In terms of shallow-water shrimp, the juveniles grow in the estuaries and then migrate to deeper waters when they attain larger sizes. The largest concentrations of *Penaeid* shrimp are found at depths between 20 and 60 meters on silt, organic-rich sediments in the northern waters off Guinea Bissau bordering Senegal.

The annual potential yield of *Penaeus notialis* on the fishing grounds of Guinea Bissau has been estimated as being in the order of 3,000 to 5,500 t⁶². However, official statistics show catches decreasing from around 3,000 to only 1,500 tonnes and declining catch rates over time. Catch rates of the shrimp fishery were reportedly as high as 700 kg per fishing day in 1967/68, but these have fallen to about 150 kg per fishing day in 2001 and are now probably even lower. Survey catch rates show the same trend, but the surveys undertaken in Guinea Bissau are not considered reliable for estimating shrimp biomass. However, they indicate a very strong decrease in relative abundance since the mid 1980s (see below). Note that the 2004 survey gives a catch potential of only 160 t (or 320 together with *P. atlantica*), but the survey was carried out with inappropriate gear for the sampling of shrimp.

These various data are consistent with a state of overexploitation. Considering a hypothetical example (see below), as effort increases past MSY, the expected results are decreasing abundance (total biomass and spawning stock biomass), decreasing total catches in spite of increasing effort, and strongly decreasing catch per unit of effort (CPUE). The problem in the case of Guinea Bissau is that we lack a time series of reliable effort data, which is essential to determine the location of the present situation on the hypothetical curve. However, the available data indicate that the current situation is one where the fishery has exceeded the effort level corresponding to MSY (falling total catches), but it is uncertain by how much.

Figure 1 : Hypothetical examples of changing catch and biomass and Standardised catch rates of Shrimp



a) Hypothetical example to illustrate a typical example of changing catch and biomass as a result of increasing fishing pressure (effort).

b) Standardised catch rates of Shrimp (all species included) obtained from research surveys.

In the case of *Parapenaeus longirostris*, a more recent assessment estimated a potential yield of about 1,200 – 1,500 t⁶³. Official catch statistics indicate stable catches of about 1000 t since 1991, increasing to 1,500 t in 2001. Recent surveys⁶⁴ have obtained low catch rates of deep-water shrimp, but again the sampling gear has not been appropriate.

It is important to note that there is good reason to believe that official statistics suffer from under-reporting and that illegal fishing may be substantial. As shown in the previous section, actual catches may be almost double (factor 1.8) official statistics. Moreover, there is no information available on the fishery for juvenile shrimp in inshore waters, which has direct bearing on the potential yield of shallow-water shrimp.

⁶² CECAF 1979; FAO/WB 2003

⁶³ CECAF 1997b

⁶⁴ Including the Spanish "Vizconde de Eza" survey in 2002.

In conclusion there is strong evidence indicating that shallow-water shrimp are overexploited and the status of deep-water shrimp is uncertain, probably fully exploited or overexploited depending on the level of IUU fishing.

ANNEX 4: FISHERIES REGULATIONS COMPLIANCE LEVELS IN THE GB EEZ

Main compliance problems relate to:

- incursion of industrial-scale vessels (licensed and non-licensed) into the 12 nautical mile zone, and further into the ecologically sensitive waters of the Bijagós island complex and biosphere reserve.
- incidence of IUU fishing in the EEZ

Compliance levels are difficult to quantify, because of weak reporting and record keeping standards, and weak operational MCS capacity. However, SOCU provides figures on non-compliance data, recorded during aerial surveillance missions between 1997 and 2001, which clearly indicate that IUU fishing (specifically fishing inside prohibited area, and fishing by unlicensed vessels) is most prominent in the southern part of the SRFC area (*i.e.* Sierra Leone, Guinea and Guinea-Bissau). Table 3 summarises some of the non-compliance data. Guinea and Mauritania figures are inserted for comparative purposes. Mauritania has the most effective MCS system in place in the SFRC area, while Guinea and Guinea Bissau MCS systems are much weaker, with correspondingly higher levels of non-compliance.

Table 1 : Aerial surveillance results for Guinea-Bissau, Guinea & Mauritania: 1997 - 2001

	1997	1998	1999	2000	2001	Av. non-compliance
Guinea-Bissau						
Flight hours	109:09	24:59	-	5:03	22:27	26%
Vessels spotted	639	120	-	65	102	
Vessels violating law	144	47	-	11	23	
%age non-compliance	23	39	-	17	23	
Guinea						
Flight hours	100:34	30:50	16:18	67:46	4:54	60%
Vessels spotted	819	194	90	605	605	
Vessels violating law	417	128	55	360	362	
%age non-compliance	51	66	61	60	60	
Mauritania						
Flight hours	387:42	433:15	396:06	418:55	363:30	2%
Vessels spotted	1,089	2,790	2,945	2,766	2,087	
Vessels violating law	28	42	25	55	13	
%age non-compliance	3	2	1	2	1	

Source: SOCU

Data for the years 1999 to 2004, provided by the Navy, suggest that 114 industrial vessels have been arrested over the 6-year period, giving an average of 19 arrests per year. These include arrests realised during sub-regional surveillance operations organised through SOCU. Table 42 summarises these data.

Table 2 : Arrest statistics established and provided by the Navy.

Year	Number of industrial vessels	Estimated value of fines (in USD)
1999	16	4,000,000
2000	21	5,250,000
2001	36	9,000,000
2002	10	2,500,000
2003	24	6,000,000
2004	7	1,750,000
TOTALS	114	28,500,000

Source: NAVY

Note : Values of fines are conservatively estimated on the basis of an average fine of USD250,000 to be applied to each vessel. Some of these vessels were confiscated and sold by the state. Some fines (unspecified) were pardoned. Nature and location of infractions not specified.

It is of importance to note that a substantial drop in arrests occurred following the putting in place of the interim government. Arrests dropped to 7 in 2004, and are likely to drop even further in 2005. This is due to the deteriorating condition of operational means. The continued high incidence of illegal fishing in Guinea-Bissau's waters indicates that the MCS activities have met with very limited success in sending a clear message to operators.